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The politics of water rights and water delivery in rural Chile

An Institutional Ethnography

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The politics of water rights and water delivery in rural Chile: An Institutional Ethnography

Adriana Angela Suárez Delucchi



A dissertation submitted to the University of Bristol in accordance with the requirements for
award of the degree of Doctor of Philosophy in the Faculty of Science
School of Geographical Sciences

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Abstract

This thesis explores the organisation of rural water delivery in Chile. Specifically, it examines the Chilean government's Ministry of Public Works programme, Agua Potable Rural¹ (APR), through the experiences of rural people's negotiated access to drinking water, their becoming members of an APR organisation, and, ultimately how their access to drinking water is institutionally mediated. As such, this dissertation is an inquiry into the organisation of community water management in rural Chile and its relation to the wider neoliberal context of water management in the country.

I use Institutional Ethnography (IE) to analyse empirically the work processes and textual practices that connect people's activities in multiple settings to create what is known as the APR programme wherein "community water management" takes place. A specific water delivery project in an APR committee in North Central Chile served as the starting point for this inquiry.

I show how water management texts frame essential aspects of institutional actions where people apply for water access. I explain how the categories of "vulnerability" and "water rights" are fundamental in ruling differential access to drinking water. The thesis argues that the APR programme is reproducing the business of drinking water. This is done via a "technical" process where "objective" decisions are made and where the systematic use of water for profit making appears naturalised or simply how things work. I show how this process is coordinated in a textually mediated sequence of actions explicitly organised for the benefit of transnational sanitary companies and Chile's powerful elite, at the expense of rural inhabitants. I suggest that avenues for securing the human right to water and sanitation to all will not only stem from amendments to the Water Code. Substantial changes to the Constitution are required, together with questioning the very existence and assumptions of the APR programme.

¹ APR is the acronym in Spanish for *Agua Potable Rural*, which translates as Rural Drinking Water.

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This thesis would not have been possible without the support of the rural Committee located in the semi-arid North of Chile where the fieldwork began. Thanks to everyone who participated in this research, directly or indirectly: Gloria Vargas, Gloria Alvarado and my friends in the Elqui Valley. I hope this work can be useful to the majority of Chile's population and environments who have been constantly marginalised by a small but powerful political elite. The new social crisis sparked by a rise on the Metro fares, is the tip of an iceberg of abuses, and the people of Chile have had enough of a neoliberal model that works only for some, while it oppresses the great majority of the country. This work is dedicated to all the social leaders who work so hard to improve the lives of their communities.

Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the requirements of the University's *Regulations and Code of Practice for Research Degree Programmes* and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.

SIGNED:

DATE:

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List of Acronyms

APR	Agua Potable Rural (Rural Drinking Water)
AdV	Aguas del Valle
BIP	Banco Integrado de Proyectos (Bank of Integrated Projects)
CORA	Corporación para la Reforma Agraria (Agrarian Reform Corporation)
CORE	Consejo Regional (Regional Council)
CONCA	Confederación de Canalistas de Chile (Confederation of Canal Associations)
DGA	Dirección General de Aguas (Water General Directorate, within MOP)
DIPRES	Dirección de Presupuesto Ministerio de Hacienda (Budget Directorate, Treasury)
DOH	Dirección de Obras Hidráulicas (Water Works Directorate, within MOP)
FENAPRU	Federación Nacional de Agua Potable Rural (National Federation of Rural Drinking Water)
FNDR	Fondo Nacional de Desarrollo Regional (National Funds for Regional Development)
FPE	Feminist Political Ecology
GORE	Gobierno Regional (Regional Government)
IDI	Identificación de Iniciativas de Inversión (Identification for Investment Initiatives)
I&E	Improvement and Extension project
IWRM	Integrated Water Resources Management
MIDESO	Ministerio de Desarrollo Social (Ministry for Social Development)
MINSAL	Ministerio de Salud (Ministry of Health)
MOP	Ministerio de Obras Públicas (Ministry for Public Works)
NIP	Normas de Inversión Pública (Norms for Public Investment)
NRM	Natural Resources Management

ONEMI	Oficina Nacional de Emergencias (National Emergency Office, Ministry for Internal Affairs and Public Security)
OP	Oper Plant
PAC	Participación Ciudadana (Citizens Participation)
PE	Political Ecology
RATE	Resultado del Análisis Técnico-Económico (Result of the Economic and Technical Analysis)
RSH	Registro Social de Hogares (Social Homes Record)
RIS	Requisitos de Inversión Sectorial (Investment Requirements by Sector)
RS	Resolución Satisfactoria (Satisfactory Resolution)
SENDOS	Servicio Nacional de Obras Sanitarias (National Service for Sanitary Works)
SISS	Superintendencia de Servicios Sanitarios (Superintendence of Sanitary Services)
SNI	Sistema Nacional de Inversiones (National System for Investments)
SNA	Sociedad Nacional de Agricultura (National Agricultural Society)
TU	Technical Unit
WHO	World Health Organization

Chapter 1: Introduction

This thesis explores the organisation of rural drinking water in Chile and shows how it is coordinated by texts and practices that go beyond any one experience. Its aim is to open up discursive connections at a variety of social levels to reveal how a neoliberal institution organises people's activities in local settings. I show how the use of water for profit making is institutionalised in a way that seems inescapable, permeating even those spaces where "community water management" goes on. The mapping of texts and institutional processes reveals how the business of drinking water in rural areas works, benefiting some while keeping rural people busy with gaining access to drinking water.

The analysis begins in the experiences of standpoint informants who are the people from the village of Arrayán who requested access to water from the closest Rural Drinking Water organisation (from now on APR)²: Committee Algarrobo-Viejo³. APRs are community led organisations which can be legally constituted as committees or cooperatives⁴. APRs were created in 1964 and since then have had the responsibility to manage, administer, and implement drinking water systems in rural Chile, which are usually built by the State. They are composed by a board of directors and a team of workers who deliver drinking water to the APR members who in turn, must pay a membership fee and their monthly water bills to the APR. The income received from water bills is used to keep the system running, and not for profit making.

At the time of my fieldwork Arrayán's residents were outside the APR as they were not yet members of the Committee. To become members and get a connection to the APR's water system, they had to engage in a five year-long process which was mediated by institutional texts and work activities at different levels of government. This is the process my thesis uncovers.

² As mentioned earlier, APR is the acronym in Spanish for Agua Potable Rural, which translates as Rural Drinking Water.

³ I use pseudonyms to maintain the anonymity of the Committee and the village where fieldwork took place. I also use pseudonyms to maintain participant's anonymity, except for participants who are public figures.

⁴ I will explain the differences between these two organisations in Chapter 3.

The efforts and experiences of the people from Arrayán are not available from official accounts about “community water management” as those accounts do not consider the experiences of people who are not members of APRs (Decoop, 2016; 2017, p. 96; DOH, 2015, 2017; FENAPRU, 2016a; MOP, 2004). Moreover, those accounts gloss over the experiences of APR *dirigentes*⁵ who regret having dedicated their lives to their APRs, portraying a romanticised image of social leaders. This thesis unveils some of the mechanisms by which official accounts separate social phenomena from real human efforts, objectifying people and replacing them with categories such as “the Committee” or “the Federation” rendering people’s work invisible.

My aim is to examine how the everyday activities of people in a local site are shaped by institutional processes going on at other sites, and which are not fully observable within the local setting. Institutional Ethnography (IE) proposes that we examine the role of texts in large scale organisations as texts are of foundational importance to what we call “institutions”⁶.

Texts are replicable material objects that carry messages such as books, films, musical scores, images, databases, websites, application forms, and posters, among others. The most important feature of texts for an IE analysis is that they are replicable and can be reproduced many times through printing press or digital means, which means that lots of different people can read the same texts in different places and at different times. Texts carry mandates that organise people’s understandings of how things should be. Part of IE’s project is to explain how the work activities people do in a particular place are shaped by processes that coordinate their work and knowledge producing a world known in common (Turner, 2003). This public knowledge relies heavily on representations of the world and that is why texts are central in this analysis.

Dorothy Smith, the germinal architect of IE, claims that by looking at texts as activated by people, nominalisations such as “organisation” or “discourse” can be explored ethnographically to

⁵ Community leaders who work on a voluntary basis in a range of topics including APRs, but also clubs for the elderly, neighbourhood boards and sport clubs, among others.

⁶ I will describe in more detail the core concepts and theoretical underpinnings of IE in Chapter 2.

discover how the 'extra-local forms of sociological discourse are produced out of the local ephemerality of people's everyday/everynight activities' (Smith, 2001, p. 168).

In IE, the "extra-local" are those sites explored once the researcher has spent some time in the "local setting" (Bisaillon, 2012a, p. 613). The inquiry starts in the everyday world of the local setting and then go beyond it to explicate how the institution works. In my case, the local setting was the APR Algarrobo-Viejo where I took fieldnotes, participated in meetings, conducted in-depth interviews with APR staff and members, and looked at different documents used by them. Once a puzzle for investigation about the organisation emerged, I moved into the "extra-local" world to explicate how that puzzle⁷ was put together. This is what Campbell and Gregor (2002) describe as the detective work needed to discover the missing organisational details of how the local setting works, which is done by stepping into a broader setting: the extra local. This is referred to as the second stage of research, which is inevitably linked to the research done in the local setting and might include the reviewing of additional documents and interviews with other participants. This is not to be understood as discrete levels of research, but as an iterative research process in which both levels are connected, and in which the first level provides clues to follow the process for explanation. Learning about the ways in which people's knowledge and work in the local setting are organised outside their control makes it possible to understand subordination. When this understanding becomes clearer, we can start drawing a map of the ruling apparatus.

Usually, the knowledge created and displayed in extra-local sites is at odds with the knowledge participants in the local setting have about their own experiences. Those contrasting knowledges inform the "disjunctures"⁸ used to explore the "ruling relations"⁹ which are usually created in the extra-local world. Thus, by beginning in the experiences of people we can challenge dominant

⁷ Also called in IE the "problematic", which I will explain in more detail in Chapter 2.

⁸ A disjuncture is an IE term which points at the gap between an experiential or subjective way of knowing something, and an ideological or objective one.

⁹ This is one of the main concepts in IE and it grasps power as a complex of organised practices that regulate, organise and direct, including the government, law, business, professional organisations, educational institutions, and discourses that permeate various sites of power.

ways of thinking about the effects of government programmes or legislations and we can offer a contextualised understanding of the experiences of those at whom legislations are directed. As this thesis shows, the APR programme (which aims to deliver drinking water to rural people) ends up preventing access to water by imposing various obstacles on those requesting it.

In this Chapter, I explain my motivations for researching “community water management” in Chile. I review the main trends in water management approaches and their critiques, mainly from political ecology. Despite sharing many of the goals of political ecology, I have identified an analytic gap wherein I situate my contribution. The chapter concludes by presenting the structure of this thesis.

Motivations

My interest in community water management emerged from Chilean media and government accounts about *Ley 20,988 de Servicios Sanitarios Rurales*¹⁰ (MOP, 2017), from now on “Law on RSS”. This law was passed in 2017 after a 14 year-long process of negotiations between State officials and *dirigentes* from the *Federación Nacional de Agua Potable Rural* (FENAPRU), hereafter, “the Federation”. By all official accounts, including the government’s and the Federation’s, the Law on RSS enjoyed broad participation from APR organisations and works in the interest of rural communities (Calcagni & Cabaña, 2013; Decoop, 2017; DOH, 2017; Larraín, 2013; Villarroel, 2013). The Law was said ‘to protect the associative model of community water management in our country which has proven to be one of the most successful in Latin America and it prevents privatisation’ (Decoop, 2017; DOH, 2015). After 52 years of operating without a regulation of their own, the Law aimed to regulate the operation of APRs by defining their rights and duties, as well as the role of the State. It also incorporated sanitation, which is absent in more than 80% of rural areas (Interview with Leader of Community Development, APR Programme, Santiago).

¹⁰ Law on Rural Sanitary Services, from now on “Law on RSS”.

I was born and raised in Chile during the Pinochet military dictatorship¹¹ (1973-1990), a country where law-making has remained a top-down exercise. I found it fascinating that the *dirigentes* were not only active in crafting the Law on RSS, but they were also denouncing the negative effects the Water Code presented for drinking water (Decoop, 2017).

During the 1980s there was a trend towards neoliberal policies in Latin America, and Chile was no exception. The Chilean Constitution of 1925 was replaced by the military regime with the 1980's Constitution, which included radical neoliberal economic reforms in the areas of education, pensions, health, and even water management. The Constitution was written by the "Chicago Boys", a team of economists trained by Milton Friedman in the Chicago School of Economics. Neoliberal ideologies propose that social functions be managed through the free market, and that economic development is best left to private initiatives (Budds, 2004). For example, article 19, number 24 of Chile's 1980 Constitution establishes the property over water resources as a private right (MINSEGPRES, 1980). The Chilean Water Code was designed in 1981 within this economic logic to create a system of privatised water rights that could be freely traded and with minimal state regulation (Budds, 2004).

Gloria Alvarado, the president of the national Federation of APRs, declared that 'for the first time in Chile a legislation was drafted with constant citizen participation [...] We also must thank the President of the Republic¹² for supporting this initiative, we are grateful for the willingness of the DOH and MOP to work horizontally with us and the parliamentarians for their constant support'¹³ (Decoop, 2017). I wanted to interview Alvarado, as the involvement of rural communities in law-making was unprecedented in Chile. Alvarado also mentioned the idea of this legislation came from APR *dirigentes* who were concerned about a request from a private

¹¹ Chile's military dictatorship ruled the country for 17 years. This regime was established after a coup d'état led by General Augusto Pinochet, with which the democratically elected government of socialist leader, Salvador Allende, was overthrown. The regime suppressed political parties and persecuted and tortured tens of thousands of political prisoners. It is estimated that 3,000 people died during this regime or went missing and 200,000 Chileans left the country in exile.

¹² In March 2017, at the time of this newspaper interview, Michelle Bachelet was the President of Chile (2014-2018).

¹³ All translations from Spanish into English included on this document are mine.

sanitary company to take control and manage some of the largest APRs in the country. In her view, private management of drinking water in rural areas would be a threat to the sustainability of the APR community management model. Privatisation, it was worried, would increase water tariffs and end personalised water services, disallowing customers' flexibility in the management of their water bills as private sanitary companies do not provide customers with ease of payment (Decoop, 2017).

During my fieldwork, however, I realised there was a general lack of awareness in the local setting about the existence of this Law. Nobody within the committee Algarrobo-Viejo had participated in the law-making process and people were concerned with other issues, mainly the implementation of the Improvement & Extension (from now on "I&E") project. The I&E project aimed to provide drinking water to newcomers, the people from Arrayán, who wanted to become members of the Committee and gain access to water. This project turned out to be the main text-mediated process I explore in this thesis.

The approach

A lecturer at Bristol University suggested I read about IE. Reading the work of Dorothy Smith revealed that the inequalities studies of the Political Ecology (PE) of water are concerned with do not 'arise from the tendency of water to flow to the powerful and privileged' ("Santa Cruz Declaration on the Global Water Crisis," 2014, p. 246). Rather, it is human made institutions perpetuated by humans that have institutionalised problematic ways of allocating water. I started to see the world in a different light and Smith's method encouraged me to explore organisational processes from the bottom-up, which is what the literature on the Political Ecology of water called for but did not seem to know how to do. Instead of beginning from the standpoint of the social leaders, the Federation, the government, or the media, I learned that if I wanted to understand how access to drinking water in rural areas was organised I needed to start from the experiences of actual people living in rural areas who were in need of potable water. I realised when returning from fieldwork that the repetition of themes and coding was not helpful when

doing an IE because it is not important to identify how many people said what, but that connections and social relations are what we, as critical ethnographers, need to look for. This meant I had to change supervisors so that I could be allowed to take IE with all its premises and promises instead of infusing parts of my research with it. I felt motivated by the premise of IE which is that people are experts of their own lived experiences, and that the ways in which they live their everyday lives are shaped by powerful external forces or “ruling relations”. Including the views of those whose perspectives have not been accepted as legitimate is fundamental if we want to improve unsustainable arrangements. The bold aims of IE inspired me to do research that would be useful to people, research that intends to change oppressive institutions so that they better work for people, instead of fixing people to better fit into institutions. Thus, I set off to explicate how the experiences of people targeted by the APR programme are organised by discursive and professional forms of power that are created by someone else, somewhere else.

In the following section, I review international trends in Integrated Water Resources Management (IWRM) and calls for more participatory approaches to study natural resources management (NRM) institutions. Studies of PE advocate for the incorporation of indigenous and local knowledges and identify the existence of hierarchical social relations embedded in NRM institutions (Howitt & Suchet-Pearson, 2006; Nadasdy, 2003). This body of literature criticises neoliberal water policies, denounces problems of water allocation and looks for alternative ways to manage water that are socially and environmentally sustainable. I recognise and build upon this work, as I am also concerned with how marginalised communities are often ignored in the name of production and efficiency. I too criticise policies that benefit irrigation schemes for agricultural export and water accumulation, in detriment of small farmers and domestic needs for water. However, the way I approach these concerns has allowed me to generate a different kind of knowledge about community water management in rural Chile and to show how it connects with and reinforces a wider neoliberal institution of water management. I explicitly demonstrate how differential access to water is organised to happen as it does, uncovering the discursive mechanisms behind an organisation that prevents access to water for rural people.

Studies of water management

The principles of IWRM have informed approaches to water management in many countries (Anokye & Gupta, 2012; Dungumaro & Madulun, 2003; Mehta et al., 2014; Ongsakul, Resurreccion, & Sajor, 2012; Rouillard, Benson, & Gain, 2014) including Chile, which has been considered by some as ‘a world leader in water governance’ with a major ‘commitment to development based on an export-oriented open economy’ (Rogers & Hall, 2003, p. 30). The basic premise of IWRM is that land and water are ecologically linked in a river basin¹⁴ which is considered the natural unit of analysis (Rouillard et al., 2014). This discourse values water as an economic and social good (GWP, 2015, 2016) encouraging decision makers to consider both efficient allocation of water and equity issues (Rouillard et al., 2014). The Dublin Principles (UN, 1992), which provide the basis for IWRM, recognise it is a ‘basic right of all human beings to have access to clean water and sanitation’ and that this service should be granted ‘at an affordable price’ (UN, 1992, p. 4). What is meant by affordable is not defined and these principles of water management heavily rely on scientific and expert knowledge (Dobson, 2007) with local knowledge added as a complement to decisions already made (Braun, 2010; Nadasdy, 2003; O’Faircheallaigh, 2010).

During the 1970s an analytical approach to the study of societal-nature relationships started to incorporate critical discussions of technocratic management. Political ecologists criticised the emphasis on catchment areas as units of analysis claiming a focus on such scale neglected the inputs of local communities (Joy, Seema Kulkarni, Roth, & Zwarteveen, 2014), favouring some systems of knowledge over others in what some call the “politics of scale” (Perramond, 2012; Perreault, 2014; Rivera et al., 2016; Rouillard et al., 2014). I will now describe some of the trends I have seen in PE studies especially in relation to community approaches to water management, to then specify what my project does differently.

¹⁴ Depending on which part of the Anglophone world we are in: ‘watershed’ is used in American English, while ‘catchment’ is more used in Australian and British English. Both are synonyms for ‘river basin’ (Molle, 2009, p. 484).

Political Ecology and its object of study

With an interest in power, class, property, and differential access to resources, political ecologists incorporated Foucault's understandings of power (Watts, 2015). The experiences these scholars research refer to the economic interests of large transnational corporations that seem to manage policies at the local level, preventing local actors from participating in the management of common resources. PE is usually concerned with power imbalances between different scales and studies usually look at case studies to draw lessons that can be applied in other places, and which can inform theory building. Some of them seek to map resistance, as a way to understand how alternatives to neoliberal water management can be encouraged. Scholars have argued that for water governance to be effective, it requires the promotion of bottom-up approaches (Berkes, 2007; Botes & Van Rensburg, 2000; Carlsson & Berkes, 2005; Olsson, Folke, & Berkes, 2004). The Santa Cruz declaration signed by several political ecologists¹⁵, proposes community-based management as a way to readdress power imbalances and water inequalities ("Santa Cruz Declaration on the Global Water Crisis", 2014). I will look at each one of these topics to then describe studies of the PE of water management in Chile.

Issues of scale

Some claim that PE has tended to provide non-relational analysis that 'privilege hierarchical understandings of scale' (Coombes, Johnson, & Howitt, 2012, p. 812). For example, Wisner looks at 'institutionalised water processes' in Tanzania where people became 'inhibited in their attempts fully to integrate into an irrigation-based village economy' (Wisner, 2015, p. 59). Although he recognises that 'one could theorise all sorts of things, but putting them into practice is quite different' (Wisner, 2015, p. 56); the research does little to deepen exploration into how people in a local setting might organise to 'resist' (Wisner, 2015, p. 60). Resistance is assumed

¹⁵ Rutgerd Boelens, Jessica Budds, Jeffrey Bury, Christopher Butler, Ben Crow, Brian Dill, Adam French, Leila M. Harris, Colin Hoag, Seema Kulkarni, Ruth Langridge, Flora Lu, Timothy B. Norris, Constanza Ocampo-Raeder, Tom Perreault, Sarah Romano, Susan Spronk, Veena Srinivasan, Catherine M. Tucker and Margreet Zwarteveen.

and the institutions that exploited the Maasai are not explained. Questioning dominant power relations does not necessarily provide tools for the community to understand how those social, political and economic relations of ruling are organised to work against them.

Feminist Political Ecologists (FPE) focus on the scales of the body and the intimate (Bryant, 2015, p. 265) taking a 'situated engagement' (Haraway, 1988, p. 589) as an alternative to discourses that stress technical, disembodied and "neutral" strategies. FPE aims at researching environmental and social change in ways that incorporate multiple knowledges (Harcourt & Nelson, 2015). In a book chapter, Harris rejects binary constructs of private/public and suggests this dichotomy can be approached by looking at the "3Es" that sustain livelihoods: everyday needs, embodied interactions and emotional and affective relations with the environment we live in (Harris, 2015, p. 158). But where do these "3Es" come from and how do they relate to the "macro" organisational structures of market-oriented approaches? In such studies, the problem of a 'hierarchical understandings of scale' (Howitt, Coombes, & Johnson, 2012, p. 812) is dealt with by turning the hierarchy upside down.

Similarly, Sultana (2011) examines how water access is mediated through emotions in an attempt 'to push the boundaries of theorizations in political ecology [...] to engage with the emerging literatures on emotional geographies' (Sultana, 2011, p. 171). Sultana's study is concerned with legitimising the everyday experiences of rural women in Bangladesh as a significant scale of analysis. However, it does not concretely demonstrate how intimate and personal experiences hook into wider social relations of water access, connecting with national or global scales of political economy. The author describes how some women would collect water from the well of a wealthy person, but she does not show how is it that a 'well to-do-farmer' (Sultana, 2011, p. 167) has control over water while these women do not. The analysis does not go beyond the patron-client relationships to address issues of safe water access. The material social relations or contexts these study claims to illuminate may be discursive, ideological, affective and in relation to subjectivities. Nonetheless, they will still have a tangible base of textual practices that could have been identified, mapped and inquired into (Walby, 2005).

My study provides an alternative to conceptualisations of scale and scale dynamics by looking at how people differently located within an institution are coordinated through institutional texts they activate through their work practices. This offers a messier and more complex understanding of “scale dynamics”, rather than seen as discrete levels of government interacting with each other. This has implications for insider-outsider questions, as we are simultaneously inside the institution we are exploring and outside certain aspects of it, especially the making of the ruling relations.

From case studies to theories

A great number of studies aim to illuminate people’s experiences of marginalisation. Nonetheless, many end up unintentionally reproducing this marginalisation by abstracting experiential knowledge from case studies and reconceptualising people’s experiences (Truelove, 2011) to build theories that overwrite, categorise, and generalise those very experiences. Hanson (2015) uses an FPE lens to focus on women’s oral histories of socio-ecological change by looking at a recycling group in a nature reserve in Yucatán. She ‘examine[s] the motivations, struggles, and experiences of women actively involved in urban waste management’ (Hanson, 2015, p. 468). She analysed interviews with the aim to “address” how individual women speak about their personal experiences, and how those experiences relate to state-society relationships. She mentions that when the reserve was created there was ‘not sufficient agreement between federal, state, and municipal governments to organize centralized garbage collection’ (Hanson, 2015, p. 471). The author claims that women’s struggles demonstrate that neoliberal policies in Latin America allocate government responsibilities to local actors (Hanson, 2015). These findings are interesting and echo the findings of my own research, however Hanson (2015) does not explain how people’s actions connect to the mentioned neoliberal policies, neither does the analysis unveil why agreements between different levels of government have not been organised for waste collection. Rather, the focus is on highlighting these struggles to ‘legitimize women’s experience as authentic’ (Hanson, 2015, p. 478). The object of study here is not the government’s inability to deal with water management, but women’s experiences. I claim that we can begin in people’s experiences and then move beyond that experience to discover how the organisation

people take part in works. Understanding how an institution is put together can provide avenues for changing what is problematic for the people whose standpoint the research adopts. IE explores how people are positioned by institutions and how they are categorised, included, or excluded depending on who they are, highlighting the disconnect between bureaucratic processes that do not really work for people, and people's experiences of the conditions of their lives.

Harris and Gantt (2007) explore the relation between the downgrading of domestic drinking water and considerations of water as an economic good by framing debates about water in relation to 'neoliberalization processes' (Harris, 2009, p. 391) to discover how discourses of 'neoliberalized natures' and 'gender and water' (Harris, 2009, p. 388) can work together. Harris (2009) is concerned with how participation and water rights matter for equity and sustainability and claims the context in which neoliberalisation unfolds needs further research. Despite these intentions, that context is not investigated but left to a 'cross-fertilization' between literatures (Harris, 2009, p. 387). Instead of assuming this "context" exists, I map these processes without overlooking people's work practices or the texts they use to accomplish differential and neoliberal water access.

Pratt (2012) advocates for a materialist analysis of everyday practices, rather than beginning in pre-established concepts and categories. Having said that, she studies a community of Chilean leaders from conservation organisations and how they come together and grow apart, 'to explore how togetherness is constituted through practice and emotion' (Pratt, 2012, p. 178). Still, the problem she attempts to overcome about beginning from preconceived social categories is addressed by using theories of practice and emotion. Pratt (2012) ends up reproducing what she tries to surpass by analysing the interactions of a group of people under an already determined frame that tells her what to look for when assessing people's interactions. In contrast, I am not interested in dissecting people's behaviour to assess whether they fit or not pre-determined categories. I am interested in exploring how people's activities in the local setting are coordinated with the activities of other people.

Mapping resistance

Bryant and Jarosz (2004) state that systematically mapping out policy connections at various scales and taking into account embodied practices upon which policies and regulations act, feminist philosophies contribute to political ecology by adding a gender dimension to issues of access and control over resources. However, none of the studies graphically mapped out connections between scales. They did not show how people are at work in their bodies and at the same time participate in powerful institutions with others. Only a few of these feminist studies take up issues of positionality, accountability, and the role of the researcher in the production of knowledge.¹⁶

In the introduction of a special issue on FPE, Elmhirst (2011, p. 130) reminds us that ‘people are conceptualised as inhabiting multiple and fragmented identities’, as well as networks for resisting development. People are understood as existing in discourse, reduced to categories and “conceptualised”, while resistance against institutional arrangements is not explored in detail. Theory can be useful in understanding the world and although IE relies on deep theory and on an ‘ontology of the social’ (Smith 2001, 2005b) it acknowledges that if we begin a research project in theory we might miss out on what is going on in people’s lives. IE proposes that listening to people, focusing on their experiences to then analyse and critique institutional practices is a much more effective way to begin the inquiry because we can show what is actually happening to people from their standpoint. The aim is to understand how people experience structural discrimination from institutions based on categories and assumptions that position them differently according to institutional expectations and generalisations. This is not to say that concepts and theories are not useful, but that they do not explain how things are organised to happen as they do for people in the standpoint.

¹⁶ For a more comprehensive inclusion of these concerns see Orla Murray’s PhD dissertation on “Doing Feminist Text-Focused Institutional Ethnography in UK Universities” (2019). Murray takes seriously the question of how to do feminist sociology using Dorothy Smith’s ideas and provides interesting contributions to Smith’s approach when exploring textually organised relations of ruling. She reflects on what makes research ‘feminist’ and how to do it in practice.

Nagar, Lawson, McDowell, and Hanson (2002) state everyday practices help illustrate 'how informal economies of production and caring subsidize and constitute global capitalism' (as cited in Truelove, 2011, p. 150). My research also reveals that practices of caring for community feed into and reproduce capitalist ways of managing water. Yet, I illustrate and make explicit the connections between community practices and other levels of government and the economy showing how people's work at the local setting is organised to accomplish what these studies call "global capitalism". I see the concept of "neoliberalism" as people's work practices and materialised in texts, which erases the gap between the micro and the macro. This detailed mapping uncovers a larger, more complex picture where people in the local setting are at work and in coordination with the work of other people through the active use of texts.

In terms of studies interested in resistance, Bakker (2010) views community-led irrigation in the Andes as challenging engineering expertise and defending water access (Bakker, 2010, p. 40). She calls for more ethnographic work on water supply practices. My research responds to her call as I describe how certain aspects of the everyday experiences of people are organised by institutional discourses that penetrate local settings in very concrete ways and often have detrimental effects on people's lives. Rather than assuming resistance I show how people's work activities reproduce these institutions, sometimes without their awareness.

Recent studies criticise how water is almost always understood as a resource, and encourage us to think about human relations with the non-human that are more reciprocal and sustainable (Strang, 2016). The book *Thinking with water* (Chen, MacLeod, & Neimanis, 2013) provides a useful way of reflecting about this. However, my approach focuses on humans as the primary political and social agents and offers the capacity to understand the world as the ongoing, organised relations between people in an organisation that requires texts to make it actionable. This approach can show how the material world is institutionalised, coordinating differential access to water and enforcing the power to make such differentiations.

Participatory approaches

Some suggest that co-management approaches to NRM better “deal” with multiple knowledge systems, scale issues, and “stakeholder” participation. Co-management, it is argued, emphasises learning through experience and draws attention to the role of governance, equity, diversity and justice (Armitage, Berkes, & Doubleday, 2007; Chapin III, Sommerkorn, Robards, & Hillmer-Pegram, 2015). This is considered a bottom-up process where trust is essential and leadership emerges from within the community to facilitate management processes (Olsson et al., 2004, p. 85). Leadership is supposed to arise from within a community and leaders are expected to “facilitate” co-management approaches. Higher levels may engineer appropriate conditions to promote desirable ‘development trajectories’ (Olsson et al., 2004, p. 85). My thesis explores the mechanisms by which higher levels engineer concrete conditions that would force people to engage in specific work processes.

The issue of developing research ‘from everywhere and nowhere’ (Haraway, 1988, p. 584), comes up regularly in the literature. For example, Ananda and Proctor (2013) studied the importance of collaborative institutions for water management in Australia’s Northern Territory. They used Ostrom’s framework based on an ‘institutional rational choice perspective’ (Ananda & Proctor, 2013, p. 98) where ‘decisions made at each level of the institutional hierarchy are bound by the institutional rule set of the superordinate level’ (Ananda & Proctor, 2013, p. 101). Although the authors recognise there is a process going on within institutions, the standpoint adopted is a “neutral” one. In addition, the work people do is not explored, preventing an exploration of how activities at one scale connect with the work of other people at another scales. Instead, the authors created an unpopulated diagram where the institution is seen as shaped solely by texts. When people are mentioned, they are either represented by a committee or group of users and deemed responsible for preventing collaboration.

A study highlights the gaps between theory and practice in ‘stakeholder participation’ within the context of the public Environmental Impact Assessment (EIA) system in Chile (Lostarnau et al., 2011, p. 2471). The authors assessed the ‘ability of stakeholders to participate in relation to the protection of water resources alongside the development of mining projects’ (Lostarnau et al.,

2011, p. 2474). They employed the United States of America's Environmental Protection Agency's (EPA)¹⁷ 'Guidance for Implementing Public Involvement' to interpret local people's experiences. They concluded there is a significant lack of education and interest from citizens in environmental matters as they did not satisfactorily fulfil the criteria they were assessed against (Lostarnau et al., 2011, p. 2472). The objects of study in this paper were local stakeholders and their capacity to fit into already established processes was under assessment.

Some scholars however, do not take people as their objects of study, and instead assess the suitability of co-management approaches in resolving indigenous land claims (Howitt et al., 2012; Kepe, 2008; Nadasdy, 2003). For instance, Nadasdy (2003) recognises that co-management approaches are inserted in the old structures that have historically disempowered indigenous communities, perpetuating and even exacerbating power imbalances which foster distrust around co-management practices. In a different study, Nadasdy (2016) identifies 'a gap between the legal category of First Nation citizenship and northern indigenous peoples' ideas about political society' (Nadasdy, 2016, p. 3). However, he does not question the institution of land claim and the agreements that have created that category, leaving the institutional organisation unexplored, which in my view is a missed opportunity to find avenues for change.

The work I reviewed here expands the conceptual framework available to scholars and activists. A question remains, however: how are processes scrutinised and unveiled for the people affected by them? A trend in these studies is the use of discursive objects such as "structure" and "globalisation" and other nominalisations which have the power to do things. They usually grasp people as either victims of "institutional arrangements" or as responsible for the failure of co-management projects. Although these studies are helpful in theorising and re-conceptualising water management and discussions on scale, in my view they end up reproducing the same methods and institutions that perpetuate the exclusion of historically marginalised groups. I suggest that including multiple actors in decision making processes does not necessarily change

¹⁷ Environmental Protection Agency from the United States whose emphasis is to study and regulate issues of environmental health.

the conditions that oppress people, nor does it improve their capacity to shape outcomes in ways that support their interests.

Community water management in rural Chile

There are a few studies from people working in Chilean NGOs¹⁸ (Larraín, 2017; Villarroel, 2013) which are mostly concerned with describing the privatisation of water rights in Chile and pushing for modifications to the Water Code (Frêne et al., 2014; Larraín, 2006; Larraín, 2013; Larraín, 2017; Larraín, Aedo, Navarrete, & Villarroel, 2010), including the recognition of the human right to water (UN, 2010). My work shares the concerns about the recognition of water as a human right and more importantly, its implementation. However, I question the very existence of community organisations in charge of managing drinking water in rural Chile.

Critical accounts about the politics of water management and delivery see the lack of political will as the reason for the marginalisation of rural areas (Calcagni & Cabaña, 2013, p. 2) and claim that APRs are at the margins of the neoliberal model of water management (Calcagni & Cabaña, 2013). Others identify vested economic interests of corrupted politicians (MODATIMA, 2019) as the causes for the profitable business of drinking water. However, these value judgements do not explain the mechanics by which rural communities get neglected in their need to obtain water access or how the unequal distribution of water is organised. The aim of my research is to explain how institutional processes are put together through the everyday activities of people and their usually well-intentioned work practices. This thesis is concerned with what is troubling and contradictory in the experiences of standpoint informants providing an exploration of the social organisation of those experiences as they are coordinated by the water regime and socio-economic classification processes. The exploration begins in the experiences of people without focusing on them as the objects of my study but rather questioning the institution that works to produce differential access to drinking water.

¹⁸ Non-governmental organisations

Contribution

My research differs from the studies reviewed above in that I explore the institution of community water management through the standpoint of those who needed access to water but who were *not* yet members of an APR. All official accounts I read before going to the field were written either from the standpoint of the Federation (Decoop, 2017; FENAPRU, 2016b; MOP, 2017), or that of the State (APR, 2018; DOH, 2016; MOP, 2017). These accounts are authoritative given the places from which they were published and by whom: the government's DOH website, the Federation's website, and the media. But, the material circumstances of *how* things happened from the standpoint of those who were *not* already members of the organisation were not documented. This means that the voices and efforts of those who are most vulnerable to water access are marginalised by existing scholarly work as well as by planners and decision-makers.

The way in which water access and its management is perceived, navigated, and obtained by those who need it most—i.e. those who do not already have it—is under-appreciated and poorly understood. Therefore, my aim with this study is to centre, at the core of the analysis, the voices of those seeking access to water. This study expands knowledge about the institutionalisation of rural drinking water, and about access to a basic human right, from the standpoint of those who are not only at the margins but, who at the time of the fieldwork, were outside the institution of rural drinking water. I do this by dissecting the textually mediated processes and institutional practices through which people had no choice but to get actively involved. I explain those institutional processes in a very descriptive form of analysis that allows me to show, in significant detail, how what other studies call “water politics” and “power structures” are materialised in textually mediated and bureaucratic processes that paradoxically result in the APR programme *preventing* access to water for those who are most in need.

My study begins where people are in their bodies and environments to explore how their circumstances and experiences shape their struggle for water. I give a detailed description of peoples' experiences in accessing water so as to highlight efforts, institutional and political, that

would otherwise remain invisible. I examine how their efforts in accessing water are co-ordinated by texts and by the work of other people located elsewhere and elsewhere. I map the connections between the everyday lived experiences of those involved in community water management and a larger neoliberal organisation of water rights to connect the “micro” with the “macro”. As such, broader institutional frameworks that govern water access and its provision in Chile are explored. Understanding the institutions people need to navigate to access water is key to revealing avenues for changing unsustainable and exploitative arrangements in which people are, unfortunately, forced to be active participants.

In order to recognise what this work seeks to contribute, it is fundamental to appreciate the approach of IE in its own terms. IE is not simply an ethnography of institutions nor is it only a method of research; it is something much broader. It is an ontological *and* a methodological framework for producing knowledge. It provides ‘an ontology of the social’ (Smith 2001, 2005), that is, a theory of the social world, specifically, of what exists and how things work, together with a framework for how to conduct social research. Its descriptive and analytic focus is on narrating a social ontology from the standpoint of those often most marginalised by the institutions within which they live and work. Writing the social from their experiences reveals institutional realities differently than from dominant viewpoints. Texts are essential in IE, particularly because they organise people’s lives in organisations and institutions. IE is, therefore, an expansive way of thinking about sociology, research, and about how society works. Its approach to knowledge making is fundamentally rooted in, and begins with, detailing people’s lived experiences, rather than applying a theory to refract the world differently. By approaching community water management through IE, this study seeks not only to advance knowledge about how water infrastructures and people interact for planners and policymakers, but also for people who are directly affected by institutional discourses and programmes.

This thesis also highlights the issue that although knowledge is contextual, dominant institutional representations of people and places can end up homogenising experiences and erasing difference. I explore what I think other studies often lack, which is the textually mediated

‘institutional relations that coordinate the multiplicity and variability of people’s experiences’ (Peet, 2014, p. 6). I show, often quite descriptively, the ruling relations coordinating what is publicly known about the APR programme. My study seeks to avoid the sometimes academic convention of treating institutions as actors because, by doing so, the social relations of water management remain hidden. I seek to provide an alternative to conceptualisations of scale to show how people in different sites are coordinated through institutional texts and work practices. Understanding how people account for what happens to them under the material conditions of their lives and the social relations they are part of, allows me to tell a more complex story about their work in managing water, less straightforward than what I could learn from the standard narratives depicted in the dominant public discourses.

In the next Chapter, I explain the theoretical underpinnings of IE and how this approach guided my exploration. Chapter 3 sets up the scene explaining the historical, legal, and geographical conditions behind the creation of rural drinking water systems in Chile. Chapter 4 narrates the beginning of my ethnography from the experiences of people from Arrayán whose standpoint my research adopts. In Chapter 5, I explore the construction of “water rights” and explain how they coordinate the efforts of standpoint informants in gaining water access at the local site.

In Chapter 6, I describe the work practices and processes occurring at the APR and which are undertaken by people working in the Committee. These activities were directly related to the implementation of the I&E project, which stemmed from standpoint informants’ need for water. Chapter 7 describes and maps the textually mediated work processes going on at different sites within the institution explaining the mechanisms by which the I&E project was approved, got funding, and was implemented. Chapter 8 returns to the frustrations of the standpoint informants this time to explore the construction of “(non)vulnerability” as another category with concrete implications standpoint informants. Chapter 9 describes how “community water management” works as an ideological code, reinforcing the business of water in Chile at the expense of the work and lives of rural people.

Chapter 2: Institutional Ethnography

IE is a sociological approach developed by Dorothy Smith who stresses the empirical analysis of the actual, located, material conditions and activities which work to constitute each person's own history and their mode of life. Smith developed her method of inquiry in a process of more than 30 years of discussions and contributions from other authors, as well as her own lived experiences as a single mother and as an academic in a male dominated environment (Smith, 1975, 1987). Her personal experiences led her to criticise what she saw as shortcomings within positivist ways of knowing (Kearney et al., 2018). She criticised approaches that clamp 'a conceptual framework over any project of inquiry; such a framework determines how the actual will be attended to, dominating and constraining selection and interpretation' (Smith, 2005a, p. 50). Smith was fascinated by Marx and Engels longing for 'a new social science that would not start with concepts or imagination, but that would start with actual people, their work, and the conditions of their lives' (Kearney et al., 2018, p. 294).

Smith's project is both political and intellectual and her aim is to provide a sociology from the standpoint of women that begins in the everyday activities of women's experiences and 'sees those activities as organised and coordinated by a complex of *ruling relations*' (Suarez-Delucchi, 2018, p. 201). The focus on women's standpoint¹⁹ is predominant in Smith's initial work (Smith, 1974b, 1987, 1990a, 1990b) where she explores the commonalities of women by being positioned in an organisation of social relations that has excluded them from a culture which claims to be objective. Smith (1987, p. 78) has stated that 'to begin from such a standpoint does not imply a common viewpoint among women. What we have in common is the organization of

¹⁹ Smith notes the notion of standpoint has been used before her by other feminists such as Sandra Harding. However, she uses the term standpoint in a different way to how it is used by women's or feminist standpoint theory. Smith's standpoint use does not imply it has to be that of all women. It does not privilege anyone's experiences over others, but it is a position from which people know from their experiences and from where we go on to explore how things are put together. For more on this, please refer to Smith's "Comment on Hekman's 'Truth and Method: Feminist Standpoint Theory Revisited'" (Smith, 1997).

social relations that has accomplished our exclusion.’ In this regard, and 18 years later, Smith (2005a, p. 1) adds:

If it is a sociology that explores the social from women’s standpoint and aims to be able to spell out for women just how the everyday world of our experience is put together by relations that extend vastly beyond the everyday, then it has to work for both women and men. It has to be a sociology *for* people (Smith, 2005a, p. 1).

This sociology has not only allowed me to explore the APR organisation, but also the wider institution of water management from the standpoint of people requesting access to water in rural Chile. Although not all people living in rural areas have the same experiences, they take part in the same organisation that manages the conditions of their access to drinking water and sanitation. Their participation in this organisation requires them to undertake certain work practices which, although not only fulfilled by women, often rely on unpaid work that demands time, effort and is done with a clear purpose. In the next section I describe the underpinnings of IE and its main methodological devices.

Standpoint

IE starts from a subject position - its main methodological device. Standpoints ‘allow us to give priority to difference and different voices’ (Lund, 2012, p. 220) rather than starting from abstract concepts that emphasise similarity (Smith, 1987, 1990a, 1990b, 2005). In her book *The everyday world as problematic*, Smith (1987) explains how women have been excluded from the organisation of knowledge which means our experiences and interests are not represented in the organisations that rule us. She puts emphasis on the fact that not only printed/written words but also speech have been essential in extending this thinking and discourse. When women are included in the universe of ideas, it is expected that they use the terms of the ruling relations

using the “currency of thought” which has been produced and controlled by men.²⁰ Hence, women’s thoughts and judgements ‘are sharply separated from their lived experience. As they begin to develop their own opinions, they have to check them against their collective experience as women rather than merely their personal experience’ (Smith, 1987, p. 35). This lack of authority becomes a lack of authority for knowledge based on experience, which is the case in the area of ‘natural resources management’ where technocratic institutions, top-down approaches, reliance on engineered solutions and experts knowledge have had a central place (Holling & Meffe, 1996).

Smith writes that the standpoint of women she advocates for does not universalise one particular experience²¹ but it is a place to begin the inquiry by creating space for a subject that has been absent from sociology and replaced by categories. This experience needs to be filled with the presence of actual women speaking in the actualities of their everyday worlds. IE makes room for research that begins in experiential ways of knowing from the perspective of those located outside the ruling apparatus and who have usually been marginalised from decisions affecting their lives. As Deveau (2009) puts it, not knowing how an organisation works is a form of domination and IE can show alternatives for change in the relations of power we are embedded in.

Smith saw a parallel ‘between the claims Marx makes for a knowledge based in the class whose labor produces the conditions of existence [...] of a ruling class, and the claims that can be made for a knowledge of society from the standpoint of women’ (Smith, 1987, p. 79). The notion of insider standpoint is not a category of identity such as gender, class or race but a point of entry into the exploration of the social and which anyone can access (Smith, 2005e). This is a

²⁰ In an IE workshop I attended in 2018 in Toronto, Dorothy Smith acknowledged that things have changed greatly since she started developing this method and that women are much more active in the world of “thought”. However, this does not mean to say there are no inequalities among women or that inequalities between men and women have disappeared.

²¹ The exclusion of women is not the only exclusion. Smith, for instance, considers the ruling apparatus as an organisation of class where not only the working classes are excluded. IE studies have usually taken the standpoint of marginalised groups including women, people of colour, native peoples, LGBTQ+, people with disabilities, among others.

fundamental tool for a sociology that 'does not subordinate the knowing subject to objectified forms of knowledge of society or political economy' (Smith, 2005e, p. 10). The aim is to discover the social and extend beyond the actualities of people's everyday experiences. The social is seen as arising in people's activities and not outside their worlds or in theories. As DeVault (2006, p. 295) explains, institutional ethnographic analysis shows how inequality occurs and indicates solutions that involve changing an organisation rather than 'fixing' people in order to accommodate them to the organisation. Although the fundamental changes IE points out 'remain[s] a matter of politics' (DeVault, 2006, p. 295), the research can offer a map that can be useful to activists groups and people working politically.

The insider standpoint is maintained through the inquiry process as we focus on how the coordinating work of institutions happens in people's experiences. The standpoint I adopted in my research is the one of the 34 families living in the area of Arrayán and who were at the time of the fieldwork, in the process of becoming members of the APR "Algarrobo-Viejo" to get access to drinking water in their houses. Their experiences led me to the work practices happening at the APR and which were mainly concerned with the implementation of the I&E project. This is the analytical thread I explore in detail in Chapter 6 and which led me to the exploration of other settings within the institution or what is commonly referred to in geography as "scales".

Disjuncture

People experience a disjuncture in their lives, also referred to as a "line of fault". Smith describes how she herself experienced a disjuncture between her own lived experiences as a single mother and the masculine sociology she was learning and teaching. She describes this disjuncture as revealing 'two modes of knowing, experiencing, and acting – one located in the body and in the space it occupies and moves into, and the other passing beyond it' (Smith, 1987, p. 82).

She uses the word "actuality" and "actual" to refer to people's lived experiences as they themselves know them and describe them. Actuality is the world in which the researcher does the work of exploration and which is subsumed and displaced by institutional discourses and

categories (Smith, 2005). The organisation of everyday experience between actuality and the organised world of ruling relations arises as a problematic around that disjuncture.

Smith uses the notion of problematic 'to locate the discursive organization of a field of investigation that is larger than a specific question or problem' (Smith, 2005b, p. 38). The problematic helps the researcher focus her initial gaze on the disjunctures between the actuality of social life and how it has been put together (Peet, 2014). It is not unusual for the problematic to become clearer after the researcher has been immersed in the field, talked to participants, and observed different social experiences people find challenging (Bisaillon, 2012a). In my research, the problematic was not only informed by the disjunctures described by standpoint informants (Smith, 2006) but also by other issues experienced by the wider community and which were revealed at the PAC²² event. I present the analysis using a logic of discovery, which is reflected in the writing style. For instance, the full research problematic is revealed to the reader in a step-by-step fashion becoming evident in Chapter 6. Nonetheless, it is important to acknowledge that the problems people experience may motivate the inquiry but do not determine the direction the research might take (Smith, 2005b). In my research, I decided to follow the analytic thread of the I&E project²³ which was demanding a considerable amount of time and work from people in the local setting. Although my fieldwork began by looking at the work done by the APR members of staff, I learned that most of their time was dedicated to work on behalf of a group of people who were going under a great deal of effort in order to get access to drinking water. Those were the standpoint informants, the people living in Arrayán and who were not yet members of the APR. In order to understand the social relations ruling the management of water in rural Chile, I needed to begin in the experiences of standpoint informants and then go beyond them, as the ruling relations are not visible from within those experiences. This reflects the view that the everyday world is the place where a sociological problematic unfolds rather than the object of study in itself (Smith, 1975, p. 367).

²² PAC is the acronym for *Participación Ciudadana* which translates as Citizens Participation.

²³ Murray (2018) makes an insightful critique to Smith's challenge to the researchers' perspective as an expert and argues there is an explicit privilege in that the researcher produces and writes the project. In doing so, we choose what to include or not in the description of the social. As a result, taking women's standpoint as the place to begin the inquiry from, does not necessarily challenge the researcher's privilege. This can be in part negotiated by including accountability for decisions and reflexivity.

IE is concerned with institutions and large organisations understood as forms of social organisation that generalise across many and different settings. Their generalising character will appear in any setting. In this respect, beginning the inquiry with the experiences of one or a few individuals is not a problem. Smith (1987) explains in hers and Griffith's research on the work mothers do regarding their children's schooling, that they came across the problem of preserving the movement from particular experiences to an expanded view of the landscape as seen from the site where they began the inquiry. This 'perspectival' (Smith, 1987, p. 185) view was not easy to hold as they kept going back into a more 'standard "outsider's" standpoint' such as the standpoint of the school where issues of population sampling were raised as questions of 'good' methods. I experienced a similar situation while interviewing the APR Programme Director in Santiago who questioned my method as in his view, I would be generalising the experiences of one Committee to all APRs in the country. However, this was not my intention. I knew there would be different stories for every APR but there would be a similar story, in different settings, 'about a similarly organized phenomenon' (Campbell & Gregor, 2002, p. 60). The methodological tool of the everyday world as problematic helped me remember that I was exploring how the institutional practices of the Committee organised the experience of different individuals. As institutions position people differentially, the assumptions that come with those categorisations impose commonalities of experience.

Smith rejects a binary understanding of the micro and the macro, or the local and extra-local, as her ontology of the social is accomplished in the coordination - through texts - of the doings of people located in both "worlds". This revealed to me a different understanding of "scale dynamics" as more intricate, rather than as discrete levels of government interacting with each other. This has implications for the insider-outsider question, as we are simultaneously inside the institution we are exploring, and outside certain aspects of it, especially the making of the ruling relations. As Grahame and Grahame (2009, p. 299) point out:

Ruling relations do not have a straightforward inside and outside, but involve a complex series of locations articulated to each other. As the researcher enters further into the

institutional complex being investigated, each new twist and turn opens up new inside-outside divisions.

This also has implications for researchers' positionalities which I discussed on a paper (Suarez-Delucchi, 2018), where I described my position as an insider of a culture and country in which I was born and raised while being at the same time an outsider to community water management in "Algarrobo-Viejo" and the north of Chile.

In the book *Under New Public Management* (Griffith & Smith, 2014), different IEs explore how new managerial practices affect the activities of front-line workers in the public sector. What makes the practices 'new' are the ways in which public sectors have adopted techniques traditionally used in the private sector to reduce costs and enhance efficiency. Some of these neo-liberalising practices have to do with standardisation of processes and quantitative measures of performance. Griffith and Smith (2014) explain that with the current globalised economy in which commerce, financial organisations and transnational corporations operate, nation-states have incorporated new forms of management to coordinate production processes. This book explores the ways in which economies are governed by neoliberal discourses that focus on audit practices and an increasing accountability culture. The authors examine the changing nature of national governments away from an era where states had the capacity to manage their own economy and towards increased privatisation. In this new order, what were clear boundaries of sovereignty are now also undermined by transnational forms of economic governance such as the World Bank, the OECD²⁴, and various UN bodies. Different levels of government now compete with each other to increase attraction for investment in 'a multi-layered process of conflict, competition and coalition building' (Griffith & Smith, 2014, p. 4) among different actors. The idea of there being an inside and an outside within a neoliberal economy makes less and less sense.

²⁴ Organisation for Economic Co-operation and Development.

Although defining concepts is seen as accessing the authority of the scholarly discourse, something that institutional ethnographers otherwise eschew, the way in which I address “neoliberalism” should be explained. Smith sees neoliberalism as an ideological discourse based on ‘economic theories that stress the paramount significance of a free market for general prosperity; government is viewed as costly and inefficient; concepts of citizenship stress individual responsibility for economic wellbeing and so on’ (Smith, 2005a, p. 217). In this sense “new public managerialism” is a discourse that mediates ‘neoliberalism and institutional discourses in a variety of institutional settings’ (Smith, 2005a, p. 217) such as education, health care, social work, child protection, education, and as this thesis shows, water management. Several IEs (Bisaillon, 2012b; Rankin, 2001; Rankin & Campbell, 2006; Rankin, 2014) have focused on the managerial restructuring of health care that brings the governance of public healthcare in tune with the global expansion of neoliberalism. Instead of theorising about what is happening within these institutions, these studies empirically demonstrate how frontline workers participate in public sector reforms. In my research project, I explicitly show how standpoint informants who get involved in the APR programme participate in the Chilean neoliberal water economy.

A Social Ontology

Smith is concerned with the ontology of organisations and ‘institutions, as complexes of cultural rules that [have been] rationalized through the actions of the professions, nation-states, and the mass media and that have supported the development of more, and more types of organizations’ which are components of the complex of ruling relations (Smith, 2001, p. 161). Institutions are described as distinctive modes of generalising coordination brought into being in people’s local doings in specific places and times. Institutions are her object of study and their construction is explained in her ontology of the social. In this ontology, people are active in producing the general out of the particular as they work in institutional settings. This is how institutions are always in motion as the social is an ongoing situated process (Smith, 2005b). Institutions are made up of multiple organisations, texts, and people’s related activities; they are:

complexes of relations and hierarchical organisation that organise distinct functions – hospitals or, more generally, health care; welfare; corporations [...] They are, however, embedded in and rely on the ruling relations. No institutions, no large-scale organizations, stand outside laws, government, financial organizations, professional and academic discourses, the discourses of the natural sciences, managerial discourses and on and on (Smith, 2005a, p. 206).

This mix of institutions is called the ‘ruling relations’ which in the literature reviewed above are usually described as ‘the context’. Under the lens of IE Algarrobo-Viejo would be an APR organisation which is part of a larger thing called an institution, which is organised around a specific function which is the management and delivery of drinking water to rural populations. This institution in Chile involves multiple organisations. For example, more than 1800 APRs and government agencies, mainly the *Dirección de Obras Hidráulicas*²⁵ (DOH), the *Dirección General de Aguas*²⁶ (DGA) and the *Superintendencia de Servicios Sanitarios*²⁷ (SISS). This institution is also made up of the Federation and its national leaders. The limits of an institution are not clear-cut, and we cannot easily see where the institution for ‘rural drinking water’ ends and the ‘government’ institution begins. This messy complex of social organisations is dealt with by a research that does not impose predetermined boundaries. Although institutions also exist materially, such as specific buildings or offices, they are not fully existent within a building. The bureaucratic thing that we might call the APR programme is also constituted in language as that is how the coordination of all those multiple organisations working across different locations and time is made possible. This coordination, the foundation of these relations, is textual. Texts are understood as ‘forms of writing, speaking or imaging that are replicable and hence can be read, heard, and watched by more than one individual, in different places, and at different times’ (Smith, 2005a, p. 165).

²⁵ Water Works Directorate, a department within the *Ministerio de Obras Públicas* (MOP) in English, Ministry for Public Works.

²⁶ Water General Directorate, a department within the MOP.

²⁷ Superintendence of Sanitary Services, another department within the MOP but autonomous.

This has important implications for this method of inquiry. Although my research began in a particular experience, I had to look at the ways in which that experience and local site are linked through material and observable texts, forms, policy documents and media reports that took me to other organisations (such as the regional government) where people were at work, so to understand how that institution works.

The ontology Smith examines posits that life is socially organised and people's ongoing activities are viewed as coordinated with the activities of other people located in other settings (Smith, 2005). This assumption means the researcher will already be working with a theorised view of Institutional Ethnography that focuses attention on the social relations rather than on individual actions and competence. The ontological shift that IE encourages researchers to make is to transfer the agency from the concept back to the embodied knower. This is the located individual who is in her body, performing knowledge so that she (Smith, 2006, p. 5) can understand how things are organised to happen the way they do. IE aims to understand how things work so that we can discover how to change them in more socially just ways (Deveau, 2009). This is done by focusing on the social relations and by keeping people at the centre of everyday world happenings. Such an approach does not contradict an insider standpoint as the individual is never forgotten.

Telling the truth

Smith (1999) argues that post-structuralist analysis assigns the work of 'the subject to language or discourse, thereby reinforcing the separation of the bases of consciousness from the local historical activities of people's everyday lives' (Smith, 1999, p. 98). Post-structuralism is not concerned with the relations that coordinate people's activities with each other and thus is not well suited to reveal how social relations come about. Smith (1990b) explains how an analysis of social relations can be done by reading through the text, and not simply doing surface textual analysis from within the text. When reading through the texts, we recognise texts as they are activated as a social organiser, where ruling relations accomplish this organisation. Hence, the exploration into the social organisation of knowledge begins with an actual subject, an active

writer or reader who exists before the textual reality (Smith, 1990b). Smith's textual analysis explores the intersection between the extended social relations of ruling and a bodily experience of reading or hearing. In contrast, the aim of the social semiotic project is to see ideological elements in signs that enter our everyday activities but not to explicate a sphere of activities, an institution, or signs in action (Turner, 2003). In IE, language is an everyday experience and a social activity. Talk and texts put together sequences of actions where embodied subjects are actively creating the social as they activate their signs (Turner, 2003). In my study, I begin with the experiences of standpoint informants and the moment in which they are propelled into an institution that has clear actions established for people to apply for and eventually get water. This moment is represented by the "feasibility form" which is the first textual encounter standpoint informants have with the APR institution. I explain in more detail what the feasibility form is and what it does in Chapter 6.

The 'social' in IE is the result of the mindful activity of subjects engaged with each other. Smith (2005a) understands the social as:

1. actual (in a specific place) people in their bodies,
2. what they actually do and/or are doing (including what they do in language, in thought and in feeling)
3. how their work (their doings) is coordinated with other people doing work elsewhere.

This sociology can tell 'the truth' when it enters dialogically into people's activities 'recognizing where we are in relation to others and how what we are doing and what is happening is hooked into such relations' (Smith, 1996, pp. 194-195). In the light of this sociology, the subject is not a product of discourse but is active in dialogue and in the coordination of the social process in which she lives.

Texts

Smith considers texts to be 'of foundational ontological significance to the existence of anything we can call "large scale organization", or "institution"' (Smith, 2001, p. 168). Although people have different experiences of the world, the use of language creates a world known in common, generalising those multiple experiences into utterances. Smith draws on Bakhtin's concept of 'speech genres' (Smith, 2005a, p. 127) to understand social processes. 'In Bakhtin's view, every utterance is a dialogue between the givens of language or discourse and the speaker's intentions' (Smith, 2005a, p. 127). This is key because language is seen to coordinate rather than determine as people are active participating in the social world through their speech or their writing. 'The speaker's or writer's part in the dialogue is that of finding in discourse the resources she or he needs; the part of discourse is to make the speaking/writing of intention possible and at the same time to constrain its utterance' (Smith, 2005a, p. 127). Active in the women's movement, Smith saw that uttering their shared experiences was difficult from within a discourse that could not speak of their exclusion. But in dialogue new words were created to make and serve their needs, revealing a balance between discourse as structuring and people with agency.

When we refer to something, it is a social act in which more people participate and where we recognise together the object that comes before us in that naming (Smith, 1996). Referring to something as a social organisation makes the object independent of the experiences of any one individual. As Lund (2012, p. 220) emphasises, 'understanding the language is central for understanding how people's activities are concerted'. In my study, I explore how the language used by standpoint and extra-local informants reveals aspects of an organisation that although not entirely visible to people in the standpoint, is present in their lives and has concrete implications for their access to drinking water.

Framework for Inquiry

Smith's original concepts of ruling relations, text-mediated social relations, her notion of work and work processes, and her development of speech genres are central to understand the importance of texts in organising institutions. These concepts guided my ethnographic work directing observation to local activities as they produce the social organisation in which institutional acts and people's experiences happen (Turner, 2003). This focus was essential in discovering and mapping the way water management is put together, rather than theorising about it. This framework was also useful in holding the 'perspectival' view (Smith, 1987, p. 185) rooted in the experiences of standpoint informants.

Ruling relations

One of the main assumptions made by Institutional Ethnography is that there are powerful extra-local forces defined as the:

complex of social relations that are textually mediated, that connect us across space and time and organize our everyday lives -the corporations, government bureaucracies, academic and professional discourses, mass media, and the complex of relations that interconnect them (Smith, 2005a, p. 10).

The concept of ruling relations is closely linked to the concept of ideology which Smith takes from Marx and Engels. Smith considers images, symbols, and ideas not as neutral "culture" but as a product produced by specialists from inside the ruling apparatus and by which the dominant classes maintain their control over society (Smith, 1987). However, Smith suggests that the ruling apparatus did not appear in Marx's time but rather arose with corporate capitalism which aided by technology, reproduces an identical text in diverse settings, that can be printed and distributed widely. This is how generalising ideologies that objectify consciousness into specific

and specialised social relations are produced and reproduced as independent of particular individuals (Smith, 2005a, p. 14).

Institutional Ethnography is grounded in a wider project that looks for people doing ruling in 'a historically specific, material complex of activity' (DeVault, 2006, p. 296). For example, different IEs explore institutional ideologies through a range of discourses to discover how local programmes respond to legislations with specific discursive frames 'and how those are drawn from and tied into a "meta-discourse" of neoliberalism that supplies overarching ideas to be elaborated specifically for different institutional areas' (DeVault, 2006, p. 296). A single IE can usually trace only one specific thread through these processes, but more threads can be intertwined. In this sense, IE is a project that we develop together as researchers and activists to illuminate one piece of a larger puzzle. However, the analysis must focus on a specific issue or thread of processes and 'what allows us to weave such threads together is the shared ontology of institutional ethnography' (DeVault, 2006, p. 296). My study provides an IE of the social organisation of water management within a neoliberal economy and contributes to the understanding of another part of the broader puzzle that IE, as a collaborative research project, aims at revealing.

Text-mediated social relations

As should be clear by now, texts are vital in coordinating and authorising people's activities. They allow for an ethnography to go beyond the observable and materialise the underlying assumptions and discourses that prevail in local settings. The materiality of texts is emphasised in IE as they are present in our everyday world and their replicability make them stable. Still texts are not fixed and must be understood as in movement and as potential for future action only when activated by an actual person. The reader/knower is captured in these relations through her participation in the reading of the text.

Texts occur in a 'text-reader conversation' (Smith, 2005a, p. 105) where they regulate the course of action in which the subject reads and acts in how the text organises her attention to the world,

to others or to a temporal sequence of actions. The text is active in a conversation, bringing meanings from elsewhere to the settings where it is used. The reader is active and becomes organised by the text as she understands what those words mean, informing her thinking and her activities in an institutional process. Her future understanding when reading other institutional texts or events will be organised and directed by that text-reader conversation. Texts provide instructions for how to read them properly and deliver an interpretative procedure that will apply to other texts. Smith acknowledges the reader can resist the text instructions however, even that resistance is organised (not determined) by the text she is reading (Smith, 2005a).

By objectifying experience and appearing as facts rather than as situated accounts, texts remove people from their actualities. Local events are thus interpreted and contrasted with texts describing events that happened somewhere else or which describe an “ideal” situation. Smith explains that texts in an institution produce recognisable processes by which people take “roles” and reproduce the institutional logic embedded in the texts. In these textually-mediated processes, texts make reference to other texts and thus are inter-textually related in a hierarchy where there might be a ‘boss’ (Smith & Turner, 2014, p. 10) or regulatory text that provides the guidelines, terms and interpretative frame that informs the reader on how to read lower level texts and the activities that must follow. Yet, texts do not have a regulatory capacity just by their mere existence, they have to be authorised by some institutionally established body (Smith, 2006).

The work of institutional ethnographers is to make visible the broader implications of people’s experiences in local settings by mapping the powerful forces—ruling relations—that come from outside and which hook people into translocal relations of ruling. Following an institutional text might lead to a boss text or a discourse that filters through multiple institutions and people. The product of an Institutional Ethnography is a social cartography of the ruling relations, illustrating the work processes in which texts participate as coordinators.

In my research, I was able to put together the different pieces of a larger organisation of ruling relations in which the Water Code plays a fundamental role as a text that coordinates work processes. The Water Code, however, does not stand alone but interacts with other regulatory texts such as the *Registro Social de Hogares*²⁸ (RSH) and the Chilean Constitution. These regulatory texts interact with lower-order institutional texts that carry their mandates and provide specific instructions on how to make regulatory texts applicable in multiple settings. I produced maps (Chapters 6 to 9) of these ruling relations where we can see text-based work processes occurring in different settings and coordinating the work of people in different locations, which together create the institution of rural drinking water management. In Chapter 7 I describe in detail the text-mediated social relations of the I&E project. This institutional analysis makes visible some aspects of the organisation of rural water delivery and management which is not isolated from the ongoing organisation of a water market within a neoliberal economy.

Work and work processes

Work in IE is understood generously and its analysis often relates to early feminist ideas about women's unpaid and usually invisible work²⁹ (DeVault & McCoy, 2006). Work 'includes everything that takes time, effort, and intent' (Smith, 2005a, p. 229) and it is what makes IE an empirically valid method of inquiry (Smith, 1987) as people participate in institutional processes. 'Validity' for Institutional Ethnography entails whether under specific local circumstances where material conditions are exposed and considering the complex social relations of ruling that can be discovered through ethnography, the analysis makes sense to the people whose standpoint the research adopts (Smith, 1987). The unique individual experience, as well as the extended character of ruling can be made visible in accounts of work processes in multiple settings. As people read, write and refer to texts in a text-mediated sequence of actions, they get 'involved

²⁸ Social Homes Record.

²⁹ Smith considers work in a generous sense. It includes anything people might do 'that takes time and effort, that they mean to do, that is done under definite conditions and with whatever means and tools, and that they may have to think about' (Smith, 2005f, pp. 151-152). Waiting for a lift might be considered work (Diamond, 1992).

in the production of their everyday world, examined with respect to how that world is organized by and sustains the institutional process' (Smith, 1987, p. 166). Observing how discursive categories operate to organise the work people do in local settings is crucial in IE. Thus, researchers need to pay attention to the institutional discourses that select the aspects of what people do (their work) and which subsume the actualities of people as integral to the production of the institution. But, how do we do that?

A translation takes place in terms of which actuality is transformed into something institutionally recognisable. People who are working within an institution are experts in their everyday work knowledges, by which they know what to select from actualities to make a process actionable. Work knowledges as described by Smith (2005f), involve a 'person's experience of and in their own work, what they do, how they do it, including what they think and feel' but they also include the coordination (implicit or explicit) of their work with the work of 'others elsewhere and in other times' (Turner, 2003, p. 94).

When translating the actual into the ideological, workers often participate and reproduce institutional discourses they have acquired through their work, talks, workshops or by watching others do the same work. That discourse can be based on a boss text they might not have seen nor read. This is why interviews and observation are so important, especially in relation to how people work with texts, how they read them and use them to organise their work, hence the importance of asking questions that might seem obvious to people but which might provide hints into the investigation of how their work is put together. Campbell and Gregor (2002) suggest presenting to the participants at the end of each interview, the researcher's own understanding to check the ideas and experiences people are sharing have been understood. I did this and also presented to the participants a year after the fieldwork³⁰, my mapping of institutional processes at work in the local site and beyond it, to double check my understanding.

³⁰ 21st December 2018.

In summary, the institution is produced dialogically (Turner, 2001) in a work-text-work or a text-work-text sequence of actions. In my study, I have mapped how texts mediate work done at the local site showing the connections a text draws with extra-local sites like the regional DOH, the GORE³¹ or MIDESO³² (Chapter 6, 7 and 9). In this way, a map of textually mediated work processes can help us link scales and bring the micro level of the everyday world and the macro level (such as “social class”, the “state”, etc) into a relation of interdependence.

Speech genres

The concept of discourse Smith uses is taken from Mikhail Bakhtin (Smith, 2005a) who conceives “speech genres” as relatively stable forms of utterances that come up in a specific sphere of activity. These genres keep the active subject in a chain of speech communication where objects and contexts are present and explain what to do or say next in a sequential organisation of speaking or writing. Bakhtin’s idea of language is socially active; it is what people are saying and doing, which is compatible with Smith’s idea of inquiring into the social organisation of ruling relations as the ongoing concerting of people’s activities. For Bakhtin, different spheres of activities develop their own speech genres which are in constant change as they develop (Bakhtin, 1986). Subjects are organised in social acts where they refer to, see, and recognise those genres concerting their attention through specific terms. Bakhtin’s speech genres theorise language that includes dialogic interactions even when individuals are located in different places and times. Texts and verbal speeches are always inscribed in their ongoing organisation, in a specific sphere of activity that has intentionality, having an aim accomplished through a ‘functional governing complex’ of coordinated work processes and relations (Turner, 2003, p. 225). Utterances and terminologies are important in helping us grasp the macro structures in concrete settings and to connect sequences of speech and activity. Standardised texts locate utterance physically in a routine of work in multiple settings and people who are in the setting can activate the text as they are familiar with their phrases and formats. Smith (1990b, p. 198)

³¹ *Gobierno Regional* (Regional Government).

³² *Ministerio de Desarrollo Social* (Ministry for Social Development).

discusses indexical reading of texts as 'not everything that a text says is in the text' and that there may be 'missing moments' that need to be completed by the work of expert practitioners in local settings. The way speech genres work is by presupposing working knowledge which is not always represented explicitly in the texts mediating discourse.

The influence of texts and discourses became evident in interviews I had with people from the local setting, government employees, and in the speech of politicians and *dirigentes*. Certain texts directed the way people talked about things and I realised concepts such as "water rights" and "shares of water" were used as standard ways of referring to water, actively coordinating the work of people located in different sites. What Smith calls 'ruling discourses' become part of people's activities and talk, reveal understandings about how people are defined and show how discourses intersect with each other to produce a distinctive way to organise the business of drinking water. The question IE helps to uncover is: how is this organised to happen in this way? In terms of discourses, Smith recognises ideological and institutional ones. 'Ideological discourses are generalized and generalizing discourses, operating at a metalevel to control other discourses, including institutional discourses' (Smith, 2005a, p. 224). In turn,

institutional discourses select those aspects of what people do that are accountable within it, subsuming actualities as integral to the production of the institution. Their text-reader conversations involve procedures for treating actualities as instances or expressions of institutional discourse's frames, concepts and categories (Smith, 2005a, p. 225).

Ideological discourses are those that work by informing workers how to read institutional texts producing work knowledges common within a sphere of activity such as rural drinking water management.

Analytical tools

In this section, I outline the analytical methods I have found in my extensive reading of Smith's work and the work done by other Institutional Ethnographers. As Smith has explained, textual analysis in IE can be approached in three main ways (Smith, 1990b, 1999). One of them is by looking at the making of facts and analysing an institutional circle (Smith, 1990b). Another avenue for textual analysis is mapping the ruling relations by paying attention to sequences of actions (Smith, 2006). Lastly, analysis can be done by the exploration of ideological codes embedded in discourses (Smith, 1999). As Murray (2018, p. 96) clearly points out, these strategies 'exist on a spectrum of closeness to the text'. For example, the first one is a close examination of an active text or a small group of texts that are seen as in conversation with each other.³³ The second one sits somewhere in the middle and where there is a structured textually mediated process. In the last method of analysis, different texts are drawn together to elucidate something that we can know in common and which might not be explicitly described in one text, but more in a web-like fashion where texts work together. In my study I used all three of them. I applied the first strategy in Chapter 5 when exploring the making of "water rights" and in Chapter 8 when exploring the construction of "vulnerability". I used the second strategy when mapping the textually mediated work process of the I&E project (Chapter 7). Finally, I used the third approach when analysing "community water management" as a textually mediated discourse in Chapter 9.

The making of 'facts'

Smith (1990a, p. 71) describes facts as:

neither the statements themselves, nor the actualities those statements refer to. They are an organization of practices of inscribing an actuality into a text, of reading, hearing,

³³ This activation of a text by a reader means that the operation of the text is dependent on the interpretive practices of the reader (Smith, 1990b, p. 121).

or talking about what is there, what actually happened, and so forth. They are [...] properties of a discourse or other organization mediated by texts.

The categories and concepts used in the telling of a story express how it has been organised, resulting in an internal 'coherence between the actuality thus composed and the statements which can be made about it, such that the actuality can be seen to require its own descriptive categories and conceptual procedures' (Smith, 1974a, p. 258). Those categories and concepts come from ideology³⁴, a method to produce a disjuncture between experiential and objective knowledge. Smith calls this procedure "ideological circle" and describes it as an 'interpretive schema used to assemble and provide coherence for an array of particulars as an account of what actually happened' (Smith, 1990b, p. 139). Thus, specific features are selected from actuality and assembled to tell a story that will then be read by the schema that was used to assemble those features in the first place. Facts are created as an objectified version of actuality and entered into the ruling relations as an authoritative account erasing the experiences of people. These processes are embedded in social relations where people are active and participate in writing or reading a text. As a result, people end up seeing a representation of reality in the way presented by those in power.

The way actuality is transformed into facts has been explained by Smith (1990b) when she analyses how a girl named "K" has been defined by her friends as being "mentally ill" and how various agencies for social control have institutionalised procedures for testing individuals' behaviours to then match them against the criteria defining someone as "mentally ill". Smith thoroughly describes how K's friends do the preliminary work through non-formal processes that count as social organisation. So, not only the doctors or police participate in the production of

³⁴ Smith (1999) uses the term *ideology* as described by Marx and Engels. Ideologies are the ideas by which the ruling classes organise the social relations that sustain their domination. Marx's critique of the ideological methods of the German Ideologists applies to his own work of finding methods for replacing the actual with the conceptual. In turn, the ontology Smith came up with is used to criticise the ideological organisation of the sociology she learned and taught. This sociology conformed to the production of ideological circles Marx was rejecting.

this factual account but also family or friends who describe the original events and judge them according to that schemata.

The three steps described by Smith (1974, p. 43) in the making of a fact are:

1. Actuality is written up by someone into an institutional text.
2. This text is used to replace actuality and to formulate official documents, policies and theories which are then imposed back on actuality.
3. Actual experiences are fitted into the textual reality and general categories used in institutional texts.

Legislations, government acts, policies, professional and academic criteria are examples of 'ideological accounts' that subsume actualities into categories that end up erasing people's material needs. Deveau (2016, p. 317) explains how a person can end up recreating 'the ideological way of knowing disability' in the Canadian public service, even when she experiences it differently. As mentioned earlier, I use this approach in Chapter 5 when I explain the making of "water rights" and in Chapter 8 when describing the making of "vulnerability". These are two examples where ideological accounts end up subsuming actualities into concepts that end up representing not only people and their living conditions, but also a natural feature in the case of water.

Mapping the ruling relations

Mapping locates us in the complex of relations of ruling. Similarly to the 'you are here' sign on a map (Smith, 1997, p. 393), mapping marks the difference between the experiential and the ideological ways of knowing, the disjuncture between subjective and objective knowledge. Smith (1996) explains that the competent reader will know how to read the Cartesian universe which she will activate as a "player" in the sequence of referring. In this metaphor 'the map "tells" her what features of the world to find and recognize as expressions of the relations it draws, but she has to look outside the map to find them' (Smith, 1996, p. 192).

Mapping the textually mediated aspects of a specific and ongoing institutional process can be done as work and texts in a sequence of actions (i.e.: text-work-text) which allows for the exploration of what goes on at other levels in the organisation, beyond the local setting. Conducting interviews and observations help understand how people are at work in different settings and coordinated as part of that bureaucratic processes. In Chapter 7, I explore and map the textually mediated work processes that make up what is known as the I&E project.

However, as Eastwood (2006) discovered while she was investigating the UN policy-making processes, it is not always easy to see what people do with the texts they encounter, especially when these texts are in the process of being negotiated. In this sense, the mapping of a sequence of actions turns difficult when texts have not been taken up or activated. Still, there are prior official texts the researcher can track back and which can serve to legitimise certain types of work or for establishing the terms of official discourses that will then filter through public discourse and language. Similarly, the UN declaration of the human right to water is invoked by Chilean activists in presentations to parliament and media accounts to produce a very specific modification in the Water Code which reveals the translocal power of UN documents.

Ideological code

Texts have in them a kind of ideological code that works as ‘a constant generator of procedures for selecting syntax, categories, and vocabulary in writing the text, and the production of talk and for interpreting sentences, written or spoken, ordered by it’ (Smith, 1999, p. 159). Ideological codes are found across discursive sites and are hooked in several ways into policy or political practice. For example an ideological code is what Smith calls “The Standard North American Family” (Smith, 1999, pp. 157-171). This category is not grounded in the actualities of any particular person’s everyday life; it is a standardised, ideological way to represent a non-existent ideal family. Ideological codes act as frames through which events and texts are read in particular contexts and produce a discursive order that positions people and activities differently, for example by identifying certain children as from single parent families because they scribble on

books (Griffith, 2006). This text-mediated discourse designates some homes as deviant or different. This identification is then imposed on a child's behaviour to point out that one parent families are the origin of the problem. The ways in which this discourse is reinforced is by its ubiquity in scholarly work on education and psychology, media reports that replicate those accounts, and ordinary talk about students. The code shapes everyday language as people agree with or contest the conceptions they carry about certain groups of people. Through our diverse experiences 'we reflect on and use the concept that speaks the discourse of difference' (Griffith, 2006, p. 137). Smith realised schools expect invisible mothering work to be done at home, which demands time and resources that are not usually available to single mothers. The organisation of schools relies on the existence of a middle-class, heterosexual nuclear family where the father works, and the mother is at home to help the children with their homework.

Another ideological code is the discourse of femininity which works through the ideal carried by a text together with the replicability of images, films, magazines, etc. There is an underlying pattern or code that is being communicated widely but without there being one single source. The texts are drawn together to evidence something that the researcher knows as an insider in the social world and which then she names as a discourse. Discourse is understood here as:

a matrix of textually mediated relations linking ideologies of women's sexual passivity and subordination to men with the images and icons of the texts, and entered into the organization of the everyday world and its relations through the artful work of women in producing on their bodies the local expressions of the text (Smith, 1990b, p. 171).

Standardised images showing the ideal woman enter and organise local sites where women and men pick them up. These images act in authoritative ways and operate to constitute the mainstream narrative. As opposed to the first method of analysis, the texts analysed through this approach are read in a more general way, collecting and associating them to explore how they form 'a "web" that explains what "we just know" as competent participants in social relations' (Murray, 2018, p. 99).

In my study, I analyse the ideological code of “community water management” expressed in the Law on Rural Sanitary Services (RSS) but also present in the ways people refer to water services and their expectations of them. I look at the ideological code of “mothering work” for water access and how this makes possible several aspects of community water management, which I will explore in detail in Chapter 9.

The three strategies for analysis described in this section are not distinct topics. Rather, they work together to make sense of how texts work in textually mediated institutional processes. I have used these at different moments to explicate the organisation of the APR programme and the wider institution of water management in Chile.

To finalise this Chapter, I include a summary of the research design which can be described in three phases. However, these were not separate from each other and are part of an iterative process of discovery and understanding:

1. I stayed in the local setting during the first two months of fieldwork. I went to the APR Algarrobo-Viejo where I talked to the members of staff and learned about their work. I also talked to members of the Committee who were already connected to the water system. I interviewed people from Arrayán and learned about their frustrations and experiences in getting access to drinking water, as they were not yet members of the APR. I also attended the PAC event at Viejo’s Sports Hall, where the research problematic became clearer.
2. While still living and interacting with people in the local setting, I conducted interviews at regional government agencies, talked to representatives of the *Canalistas* and social leaders in the region. I then moved to other regions and cities, such as Santiago and Rancagua where I talked to NGOs leaders, academics, lawyers, and *dirigentes* working at the Federation. I analyse the texts people in this setting used and asked questions about the way in which their work connected to the experiences I had learned about in the local

setting. The interviews conducted in the extra-local world and the textual analysis that followed, complemented the knowledge I had gained in the local setting.

3. Once fieldwork had finished, I transcribed and analysed the interviews, events, and meetings I attended. I analysed forms, legislations and other institutional texts people used in their work or referred to. I mapped the ruling relations stemming from the I&E project which I followed and described step by step, from its inception to its implementation in the local setting. I also analysed the discursive mechanisms used within the institution to construct the concepts of “water rights” and “vulnerability” which together shed light on the disjunctures experienced by standpoint informants.

This Chapter has provided an overview of the theoretical underpinnings of IE and the main concepts that have guided my research. I also explain the different methods for analysis I used and gave a brief description of the research design. The next Chapter explores the conditions in which the APR programme was created in Chile and provides a description of the region where the local site is located.

Chapter 3: Setting Up the Scene

In this chapter, I describe the historical context of the Chilean countryside and the social, political, and economic trends that gave rise to the APR programme. I provide an overview of how APR organisations managing drinking water systems in rural Chile operate, and the legislations, or lack thereof, regulating their work. I describe the ways in which water has been legislated in Chile, to arrive at the current Water Code and discussions about its modification, including the stance of the Federation within these discussions. Finally, I provide a geographical and socio-economic overview of the region and commune where the Committee Algarrobo-Viejo is located.

The *cuestión social* in urban centres

To understand why the APR programme was created it is crucial to consider the social and political choices made in Chile at the beginning of the twentieth century. The legacy of these practices manifest today in the control powerful groups such as the *Confederación Nacional de Canalistas*³⁵ (CONCA) hold in relation to access to water, and the influence of private sanitary companies in an economy that privileges water usage for industrial activities over drinking water for human consumption in rural areas.

The period between 1880 and 1920 in Chile is known as *La cuestión social* (The social question), wherein industrialisation processes and an uncontrolled growth aggravated the already poor living conditions of workers. Chile's economic development was based on the exportation of copper, silver, gold, nitrate and agricultural exports (Arellano, 1985) which is not so different to the current situation. The country was ruled by oligarchs and more than half of the country's population lived in rural sectors. The exploitation of nitrate produced a massive migration of people to the main cities, developing a new social class; the proletariat. The revenue obtained from the taxing of exports was used to build railways and basic infrastructure encouraging the

³⁵ Confederation of Canal Associations.

growth of a middle class of professionals which soon gained political relevance (Arellano, 1985). It is in the context of these political, social, and economic changes that the *cuestión social* arose. About a quarter of the families living in cities were housed in substandard and crowded dwellings in which an average of four or more people would live in one room (Arellano, 1985). Drinking water and sanitation was non-existent and infant mortality rates were above 30% (Arellano, 1985). Most of the adult population had not attended school and were illiterate (Larrañaga, 2010). Wages were low and a widespread practice was to pay workers in kind or with tokens people would use in shops monopolised by their employers (Arellano, 1985). This situation was exacerbated by an inefficient ruling class blind to the problems and complaints of the people (INDAP, 2017a).

Despite the fact that strikes were illegal, there were more than 200 of them between 1890 and 1900 (INDAP, 2017a). The emergence of workers' organisations and strikes brought these matters to the attention of elite groups. A series of essays and books were produced during this period, such as the famous Chilean novel *Martín Rivas* written in 1862, which analysed the causes of these social and economic problems and which proposed alternative solutions. A wide range of political and ideological debates followed, and action was taken. Several bills were introduced to enhance housing conditions and a Sanitation Act was passed in 1918 to deal 'with epidemics and sanitary problems' (Arellano, 1985, p. 401). New institutions were created, personnel and fiscal expenditure expanded. In 1925 a presidential system was installed replacing the parliamentary one which used to be mostly dominated by aristocrats. The Church was separated from the State, and labour laws were set in place regulating the first worker's rights. However, the 1930s depression and the invention of artificial nitrate produced great political instability during the second half of the decade as the national economy was heavily dependent on exportation. As a result, a process of import substitution began with the creation of the *Corporación Nacional de Fomento*³⁶ (CORFO) aimed at promoting the national industry through public investment and infrastructure (Arellano, 1985). These political and economic changes had

³⁶ Chilean Production Development Corporation.

important consequences in the Chilean countryside, especially through the process of rural land reform and for the way water is currently managed in the country.

Rural land reform

In the rural world, demands for agrarian (or land) reform started around 1910 with the creation of the workers' Federation in Magallanes followed by conflicts between settler colonials and indigenous peoples. A famous case involving a German settler called 'Winkler' and a Mapuche *cacique*³⁷ called 'Pailahueque' ended with the murder of the *cacique* because he resisted expulsion from his lands (INDAP, 2017a). The Confederation of National Workers was created in 1919 as social movements and discontent in the countryside grew due to the lack of land productivity, which forced the importation of food in the 1950s.

During the first decades of the twentieth century, rural Chilean society was still managed by an agrarian structure inherited from the colonial times called "*latifundio*". *Latifundio* refers to a large piece of contiguous land, an estate, that belonged to a single individual or family and which was managed through a hierarchical social structure based on authority and paternalism (INDAP, 2017a). By the end of the 1950s and the beginning of 1960s 7% of properties contained more than 89% of the land while more than half of the privately-owned land belonged to 375 *latifundistas*, the 'Latin American counterparts of feudal lords' (Yale, 1963, p. 312). This meant that most of the profits from agricultural activities ended in the hands of a small number of *latifundistas*, while the people whose labour made these activities possible struggled to survive. The first *Campesinos Convention* was organised in Coquimbo region where 10 agricultural unions had already been established. During the 1930s and after the law on Syndicate Organisations was enacted, more unions were created especially in vineyard production areas (INDAP, 2018). Riots sparked in a *fundo* in the south of Chile where 200 campesinos without lands rose against the

³⁷ A *cacique* is an indigenous chief.

State for handing fiscal lands to European settlers. These movements continued and were followed by strikes and demonstrations throughout the country.

The strongest opposition to the agrarian reform came from right-wing parties and large business organisations including the *Sociedad Nacional de Agricultura*³⁸. During the 1960s, right-wing sectors began to implement a strong campaign for the right to property to avoid expropriation of agricultural lands (Avendaño, 2014). Other business organisations saw the reform with optimism as they considered the *latifundistas* to be inefficient; they wanted to bring capitalism to rural areas and to extend the market for industrial produce (Avendaño, 2014). In 1962 President Alessandri enacted the first Agrarian Reform Law, also called “the plant pot reform” (INDAP, 2017b, p. 45) as it was deemed insignificant since most devolved lands belonged to the State. President Frei Montalva signed the Agrarian Reform and Peasant Unionisation laws in 1967 and as a result of this legislation, 3.5 million hectares were expropriated by 1970 (INDAP, 2017b). The Alliance for Progress was a programme of economic, political, and social aid from the United States which supported land reforms in Latin American countries. Its main measures aimed at improving agricultural productivity, encourage free trade within the region, and perform tax and education reforms, among others (INDAP, 2017b). The Alliance for Progress would last 10 years (1961 to 1970) with an investment projection of 20,000 million dollars from US aid agencies, multilateral financial agencies³⁹ and the private sector. It is estimated that 6.4 million hectares were expropriated by 1973 (INDAP, 2017a).

The processes briefly explained here are relevant for this study as they set the tone for the ongoing relationship between powerful political and economic groups and rural inhabitants, who have historically been marginalised. This relationship continues today and is cemented through textually mediated social processes in which people are involved sometimes without their awareness. An example of this is the way water is managed in Chile primarily for industrial uses, which I will demonstrate in this thesis. I argue that the APR programme is an extension of these

³⁸ National Agricultural Society.

³⁹ For example, the Inter-American Development Bank (IDB), a branch of the World Bank.

relationships, by which rural inhabitants are made responsible for the provision of a basic human right, which is not expected from urban citizens. Moreover, the countryside is a space used to produce services (for example tourism) and goods (i.e.: avocados) for exportation to urban areas and other countries, without necessarily benefiting local rural communities.

Water in Chile

My interest in researching community water management arose when I learned about the Water Code (Ministerio de Justicia, 1981) while studying Geography in Chile. I learned this legislation was the reason why Chile was internationally considered as a text book example of a country where water was treated as a commodity in the most unregulated manner (Bauer, 2004).

The first Water Code created in 1951 was considered by some a balanced combination of private rights and public regulation establishing an administrative procedure to grant private rights to use publicly owned waters (Bauer, 1997). Those rights were treated and protected as private property rather than administrative concessions. They were registered in local *Conservador de Bienes Raíces* (Real Estate Office) which recorded any subsequent changes of ownership. The DGA could cancel water rights when individuals were not using them for a period of 5 years. Applicants for new water rights had to specify the use they would make of water and describe the infrastructure needed to use it. The DGA would grant provisional rights that were approved only when the infrastructure had been completed and the water put to actual use. If there were competing applicants for new rights to the same waters, the DGA would follow an order of preference among different uses. Right holders could not change the uses their rights originally granted permission for, unless they gave it back to the DGA and requested new ones (Aranda, 2017). Water rights were legally tied to land ownership and could not be sold nor transferred independently (Aranda, 2017).

The second Water Code from 1967 expanded government's control in line with the aims of the Agrarian Reform Law (Acevedo, 2014) which sought to modernise agricultural production, as explained earlier. The 1967 Water Code required an amendment to the property clause in the 1925 Constitution to expand the social function of property while restricting property rights. This

Code defined all waters as a 'national property of public use' (Bauer, 1997, p. 641) and water rights lost their legal status as property rights and were treated again as administrative concessions. This meant they could not be bought, sold, or separated from the land without DGA approval. Water rights were redistributed according to technical standards of rational and beneficial use including considerations of the amount of water needed for specific crops. The DGA had the power to declare basins as 'areas of rationalisation of water use' (Acevedo, 2014, p. 14) to relocate water rights according to a priority of uses. The DGA also had power to oversee water use conflicts.

The 1981 and current Water Code was created during the right-wing dictatorship of the Pinochet regime (1973-1990) and it is in line with the principles of the 1980 Constitution (Bauer, 2004). Deep changes were implemented during this period. For example, the Agrarian Reform was reversed, and several other changes had important consequences not only for water management but for every aspect of life. The current Water Code allocates water rights for free and in perpetuity to those who request them from the *Dirección General de Aguas*⁴⁰ (DGA). The property of water rights can be transferred, sold, bought, auctioned, and treated as any other commodity. It separated water rights from land ownership, decreased the role of the State, and set the legal preconditions for a water market to emerge. Although Article 5 of the Water Code still defines water as a 'national good for public use', total freedom is granted to individuals through a *derecho de aprovechamiento de agua*⁴¹ by which people can use water for any purpose they wish. The Code does not establish use-priorities to deal with situations where two or more individuals request rights over the same waters, and such conflicts are dealt with by an auction:

For the effects of the auction, the available water flow must be divided in units not greater than the amount requested in the application requiring the less quantity of water. The right of advantageous use for each unit will be awarded to the highest bidder and so on until the total flow offered is finished (Ministerio de Justicia, 1981, art.145).

⁴⁰ Water General Directorate, a Department within the *Ministerio de Obras Públicas* (MOP) or Ministry for Public Works.

⁴¹ "Water right of advantageous use", from now on "water right".

This means the best bidder will get the water rights, as the auction results are directly related to bidder's economic capacity.

While studying in Chile I was taught the tensions and collisions of interests within river basins prevented the application of 'Integrated Water Resource Management' encouraged by international bodies such as the Global Water Partnership, the International Monetary Fund and the World Bank (Gain, Rouillard, & Benson, 2013). With the return of democracy in 1990, concerns about environmental protection, water quality and sustainability sparked a debate about the Water Code, which was unknown to many as it had been created without any public input. In 2005, the obligation to pay a "non-use fee" was introduced as a way to prevent the growth of idle water rights (Ministerio de Justicia, 1981, art. 129 b1). Another modification was a requirement for the DGA to establish a "minimum ecological flow" which would only affect new water rights constituted after the reform. However, the main changes to the Code were put forward by a group of deputies in 2011 and were supported by Michelle Bachelet's second government (2014-2017), the APR Federation (FENAPRU, 2016b) and civil society organisations.⁴² These proposed changes are described in Bulletin 7543-12 (Carey, 2016) and are still under discussion in the Chamber of Senators, as there has been strong opposition from powerful sectors, especially the *Sociedad Nacional de Agricultura*⁴³ and the *Confederación Nacional de Canalistas*⁴⁴ (CONCA). Some of these modifications include:

1. The recognition of the human right to water: new article 5 proposes that 'Water, in any of its states is a national good of public use. Consequently, its ownership and right to usage belongs to all the inhabitants of the nation'. It also recognises 'water for human consumption and sanitation as an essential and irrevocable human right that shall be guaranteed by the State' (Carey, 2016, p. 2).

⁴² Chile Sustentable and MODATIMA, among others.

⁴³ National Agricultural Society. This Society was created in 1838 and gathers producers, professionals, associations and federations linked to the agriculture and agro-industrial sector in Chile.

⁴⁴ Confederation of Canal Associations.

2. Establishes a priority of uses: proposed article 5b states that ‘the use of water for human consumption, domestic use for subsistence and sanitation will always prevail, both in the granting and in the limitation of water use rights’ (Carey, 2016, p. 2). The reform also proposes the limitation of water use rights when the public interest demands so. The DGA will have the power to temporarily reduce water rights, establish reserves, and redistribute water to fully satisfy subsistence requirements over other water uses. Geographical and climatic conditions should be considered, together with effective water availability and the situation of each river basin (Carey, 2016, p. 2).

Proposed article 20 states that anyone can extract water from waterfalls, mountain ranges or any other form of natural water emerging superficially for the sole purpose of satisfying the human need for drink and domestic subsistence, as long as they do not make a profit from this and as long as there are no rural or other drinking water and sanitary systems in the area (Carey, 2016, p. 7).

A proposed addition to article 314 would tackle one of the main concerns of the APRs: the possibility for the DGA, to declare ‘scarcity areas’ in times of ‘extraordinary water drought’, for a maximum period of 1 year, extendable to an equal or shorter period of time. To this end, the DGA will be able to suspend the works of the *Juntas de Vigilancia*⁴⁵ to redistribute existing water to fully satisfy subsistence requirements over other water uses. The effects caused by redistribution will not be subject to compensation (Carey, 2016, p. 83). Positive discrimination to APRs is proposed in article 129 bis 1: APRs, indigenous communities and small farmers are exempt from establishing a minimum ecological flow (Carey, 2016, p. 31) and from non-use fees (129 bis 9), which they are currently required to comply with (Carey, 2016, p. 36).

3. Re- definition of water rights with proposed article 6: water rights will now be defined as a temporary administrative concession limited to a maximum of 30 years, which can be extended unless water rights are not being used, which will cause them to expire. The

⁴⁵ These are “Surveillance Boards”, which oversee the managing of water in Chile. I will describe the role of the *Juntas de Vigilancia* in detail in Chapter 5.

proposal considers no less than 20 years in the case of non-consumptive water use rights mainly used for hydroelectricity and returned to the river flow (Carey, 2016, p. 4). This re-definition would apply to water rights not yet granted, which is estimated to be 10% of all superficial waters and 40% of underground waters (Larraín, 2017). Existing water rights will continue to be of perpetual property (DGA, 2018).

References to these modifications came up in conversations I had with people from the *Asociación de Canalistas*, NGOs and academics, which I describe in more detail in Chapter 5.

Drinking water

I will now turn to explain how drinking water is organised in Chile and how the APR programme fits within the wider landscape of water management. The country's APR programme was created in 1964 and has been portrayed as an example of a substantive economy (Nicolas-Artero, 2016) and a successful public-community model for water management (Villarroel, 2013). This surprised me and I wondered how the APR programme had existed alongside the Water Code, which starkly differs from the solidarity model the APR programme is based on (Villarroel, 2012).

The *Dirección de Obras Sanitarias* (DOS)⁴⁶ was created in 1953 and merged the previous Drinking Water and Sewerage Directorate with the Water Department of the *Ministerio de Obras Públicas*⁴⁷ (MOP). The role of the DOS was to study, build, repair, preserve, exploit, and manage drinking water and sewerage systems in urban areas. In the rural sector, however, the Sanitary Engineering Office from the *Corporación de la Reforma Agraria*⁴⁸ (CORA) of the Ministry of Agriculture enabled the creation of drinking water networks for peasant settlements (SISS, 2017). The *Servicio Nacional de Obras Sanitarias* (SENDOS)⁴⁹ was created in 1977 and centralised all departments and units working on sanitation (SISS, 2017). SENDOS was an autonomous

⁴⁶ *Dirección de Obras Sanitarias* means Sanitary Works Directorate.

⁴⁷ Ministry for Public Works.

⁴⁸ Agrarian Reform Corporation.

⁴⁹ Acronym in Spanish for *Servicio Nacional de Obras Sanitarias*, or National Service for Sanitary Works.

institution with legal personality and resources of its own. It related to the State through the MOP, and was made up of a National Directive, eleven Regional Directives, and two state-owned drinking water companies, one in Santiago—EMOS⁵⁰—and one in Valparaíso—ESVAL⁵¹ (SISS, 2017). The role of SENDOS was to operate and maintain sanitary systems in urban areas, while only ‘clustered’⁵² populations were provided with water in rural areas.

The *Superintendencia de Servicios Sanitarios*⁵³ (SISS) is located within the MOP and was created by Law 18,902 on Sanitary Services (MOP, 1989), also known as Law Decree N°382. The SISS is a public, de-centralised entity with regulatory and sanctioning powers overseeing the providers of rural and urban sanitary services. The SISS also determines fees for regulated urban services and oversees the application and inspection of tariff rules applied to sanitary companies, as prescribed in the tariff law and its regulations. In the mid-1990s, and with the return of democratic governments, the country's largest sanitary companies were transferred to large economic groups. For example, EMOS which used to lead the drinking water market in Santiago was acquired by a Spanish-French consortium, “*Aguas Andinas*” (Durán, 2015, p. 23). The supply and operation of sanitary services were handed over to private companies through a system of concessions while the State kept a subsidiary, normative, and enforcement role. The provision of drinking water and sanitation in urban areas previously carried out by SENDOS (SISS, 2017), had been almost entirely privatised by 2005. The process of privatisation covered virtually all urban areas in the country with the private sector currently accounting for 95% of the total drinking water services (Villarroel, 2013).

In terms of the water rights situation, the privatisation trend continued after the return of democracy when more water rights were transferred to private sanitary companies such as ESVAL, ESSBIO and Aguas Andinas (Villarroel, 2013). The State until 2010 sustained a significant

⁵⁰ Acronym in Spanish for *Empresa Metropolitana de Obras Sanitarias*, or Metropolitan Company for Sanitary Works.

⁵¹ Acronym in Spanish for *Empresa Sanitaria de Valparaíso*, or Valparaíso Sanitary Company.

⁵² Rural areas are divided in clustered, semi-clustered and scattered, which I will explain in more detail in the “Funding sources” section.

⁵³ Superintendence of Sanitary Services.

stake in these companies however, in 2011 under the first government of Sebastián Piñera⁵⁴ these assets were sold to the *Administración de Fondos de Pensiones*⁵⁵ (AFP) and the corporate conglomerates *Luksic* and *Bethia* (Villarroel, 2013). Ultimately, the State handed water rights for free to sanitary companies and provided them with a basic profit-earning capacity by subsidising citizens with lower income (Villarroel, 2013).

Rural drinking water

Before 1964 there was an urgent need to develop water services in rural areas as only 6% of rural households had access to drinking water, the dearth of which caused high rates of infant mortality (Decoop, 2016). In 1964, President Frei Montalva obtained funding through an agreement with the Inter-American Development Bank (IDB) to build drinking water and sanitary systems in rural areas. The government handed over to the communities the administration of these systems thus creating the Agua Potable Rural - or APR - programme (DOH, 2015). In this partnership, the State provides the funds to build the infrastructure of the water system, which involves the construction of water tanks, pumps, a water main and a network of pipes among other investments. On the other hand, the organised local community is responsible for managing, operating, and maintaining the system. The director of the NGO '*Chile Sustentable*' explains:

The WHO⁵⁶ declared poor drinking water quality to be the first cause of death around the globe. This recommendation came with opportunities for countries to access international funds. During that time the dominant doctrine was the "Alliance for Progress" which related to claims for sovereignty over water and land in the *campesino* world and influenced the Agrarian Reform with the aim to improve social issues in Chile during that time. However, the support the IDB provided

⁵⁴ Sebastián Piñera is the current President of the Republic since 2018 and represents the centre-right party "*Renovación Nacional*". He ruled for the first time between 2010 and 2014. Michelle Bachelet, who represents the Socialist Party, ruled before and after Piñera's first period, from 2006 to 2010 and from 2014 to 2018.

⁵⁵ Pension Scheme Managers.

⁵⁶ World Health Organization.

to Frei Junior⁵⁷ in the 90s with the return of democracy was to privatise sanitary services. So, the Bank works in a certain way under one ideological framework and in a very different way under another (Interview with Director of Chile Sustentable, 2018).

Currently, the APR programme is managed by the *Dirección de Obras Hidráulicas*⁵⁸ (from now on “DOH”), a Directorate within the MOP. The aim of the APR programme is to provide drinking water to “clustered” and “semi-clustered” rural populations by investing and supporting APR organisations in the management, operation, and maintenance of the water systems. (DOH, 2019b). The APR website states the aim is to obtain an active, responsible and sustainable participation from those who benefit from these systems through their involvement as members in the APR (DOH, 2019b). As the APR Programme Director of Coquimbo explained to me:

one of the objectives of the APR programme is for people to stay in their villages, for them not to migrate to the cities. That is why we bring them basic services so people don't come to urban areas looking for them (Interview with APR Programme Director, Coquimbo).

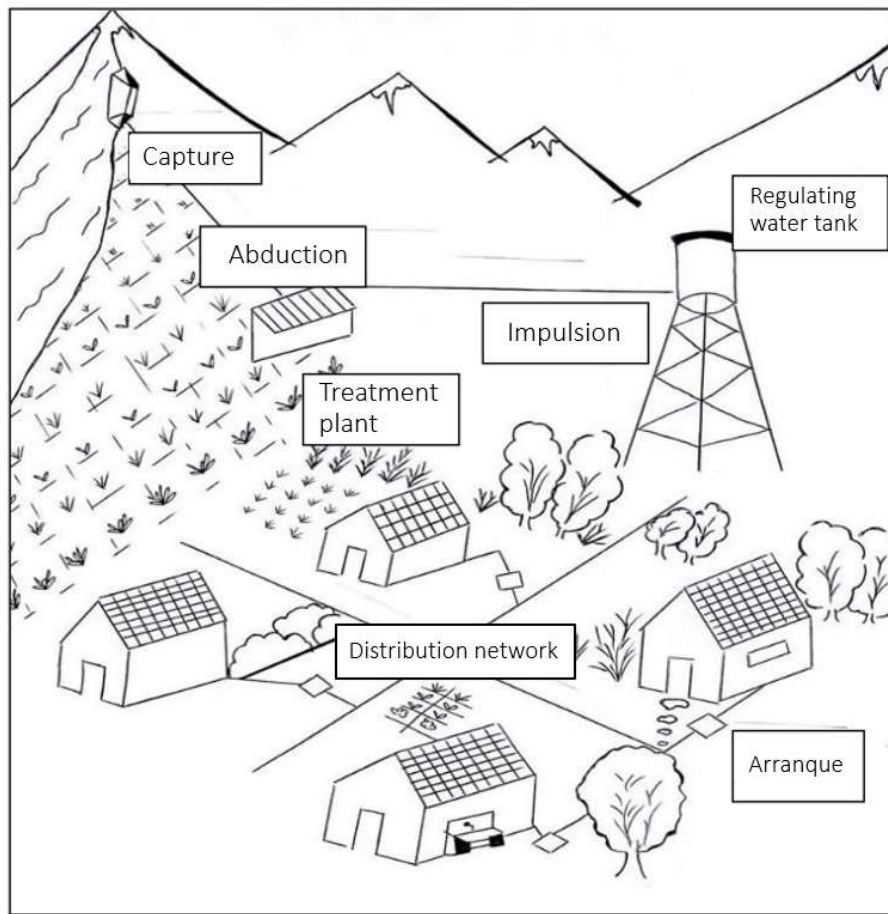
The areas in which APRs operate are described as ‘rural town[s] whose inhabitants work mainly on agricultural, extractive, livestock or small rudimentary industries. In general, rural populations have limited economic resources and the family is usually both the unit of production and consumption. It has a marked dependence to the closest urban centres in relation to labour, administrative, educational and welfare aspects.’ (MIDESO, 2015b).

In terms of the “technical” definition of APR systems, these are considered as the set of works and infrastructure developed to capture, treat, conduct, distribute and supply drinking water to rural households as illustrated in figure 1.

⁵⁷ President Eduardo Frei Ruiz-Tagle, also referred to as Frei Junior, ruled between 1994-2000 and was the son of former President Eduardo Frei Montalva who was in power between 1964 to 1970 and who initiated the land reform process and the APR program with support from the IDB.

⁵⁸ Department of Water Works.

Figure 2: Diagram of an APR system



Source: Adapted from MIDESO (2015b, p. 7)

This figure shows an idealised illustration of an APR implemented in a “clustered” rural area where approximately 68% of the rural population lives (MIDESO, 2015b). This ideal vision of an APRs does not relate to what I saw on the ground. As mentioned before only 18% of APRs collect and treat their wastewater and around 40% do not own water rights, or the water they use is not legally constituted and they get water from other sources.

There are 1,876 APR organisations in the country which deliver water services to a total of 1,726,319 people (DOH, 2019b). These organisations are located across a great variety of climatic, geographic, and socio-economic conditions and where rural livelihoods are generally poor and dependent on subsidised access to drinking water. In the north of Chile conditions are dry and rainfall is scarce whereas towards the south of the country rainfall and snowfall are more

abundant. APRs also vary greatly in size as some organisations are composed of 40 households while others have 5000 “*arranques*”⁵⁹. In urban areas, however, water delivery is undertaken by sanitary companies which as explained, have been granted a concession by the SISS.

APR organisations can be organised either as cooperatives or committees which are formed under different laws. They share, however, the same purpose which is to manage the water systems built by the State and to deliver drinking water to their members. Committees are entities created for social purposes, which implies there should not be any profits gained from water access and delivery and where the collection of a water tariff is enough to keep the system running.

The APR programme is especially interesting, mainly because Chile is portrayed as a successful example of neoliberal reforms (Williams & Carriger, 2006). The World Bank has praised the Chilean Water Code as an effective way to manage water, highlighting the benefits of privatisation on the efficient use of water (Bauer, 1997). Nonetheless, these arguments lack supporting evidence and are highly controversial or simply unfounded (Bauer, 1997). For instance, there have been important social and environmental conflicts resulting from the concentration of water rights in the hands of a few. Such is the case in La Ligua in the province of Petorca, where increasing demands over water resources for export-oriented agriculture have had serious implications for peasant communities and small farmers (Budds, 2004). These conflicts have escalated in the last few years producing social conflicts and demonstrations where the local community has sought the support of international organisations to voice their concerns⁶⁰. The work of local APRs in Petorca has become more difficult and their underground water sources have had to be replaced by water tankers paid by the National Office for Emergency (ONEMI) from the Ministry for Internal Affairs.

⁵⁹ An *arranque* is the house water connection to the mains water supply. It is the system unit by which water is delivered to a house, and it is composed of pipes, fittings, one stop tap before the water meter and a second stop tap after the water meter. Beyond this point, the system becomes the responsibility of the household.

⁶⁰ The local organisation MODATIMA ‘was created in 2010 in the province of Petorca, Valparaíso region, with the objective of defending the rights of peasants, workers and inhabitants of the area, who were being affected by theft and water grabbing from the agro-industry of businessmen colluded with politicians’ (Modatima, 2019).

Committees and cooperatives

APRs are managed by local communities which can organise either as a committee or as a cooperative, both of which must obtain sanitary authorisation from the *Ministerio de Salud*⁶¹ (MINSAL). In the region of Coquimbo where the initial stages of my fieldwork took place, there are 189 APR systems operating of which only 75 have been granted this authorisation from the MINSAL (Interview with Officer from Department for Sanitary Action, MINSAL Coquimbo). The APR Algarrobo-Viejo does not have a sanitary resolution but operates regardless, as do the rest of the APRs without authorisation. Water tariffs in APR systems are regulated by the statutes of each organisation and the quality of their water is overseen by MINSAL with bacterial and physico-chemical analysis performed regularly.

Committees and cooperatives are social organisations with different characteristics. On the one hand, committees correspond to the category of social organisations for local community development, whereas cooperatives correspond to companies of a social character. The latter are a business organisation and are defined in the *Ley General de Cooperativas*⁶² (Ministerio de Economía, 2004, p. art. 1) as ‘associations which in conformity with the principle of mutual aid seek to improve the living conditions of its associates.’ The associates have equal rights and responsibilities with one vote each. Within a financial year, cooperatives evenly distribute their gains among their members (Ministerio de Economía, 2004). Cooperatives can undertake any economic activity and are ruled by both the *Ley General de Cooperativas* as well as by laws ruling their specific economic activity (SUBDERE, 2009).

A committee is a ‘functional community organisation with legal personality and not-for-profit, whose purpose is to represent and promote values and interests specific to the community within the territory of the commune or group of communes’ (MOP, p. 3). These organisations are like public institutions but administered by the community itself. Every committee has a board of directors who are elected by its members, each of whom have the right to vote. The board of

⁶¹ Ministry for Health.

⁶² General Law on Cooperatives.

directors is composed of at least three directors: a president, a secretary, and a treasurer. Directors are responsible for managing the infrastructure for the collection, cleaning, and distribution of water; collecting tariffs and making reparations to the system is done when needed. Committees are established under Law 19,418 on Neighbourhood Boards and Community Organisations (Ministerio del Interior, 1997) which regulates the operation of a variety of groups, including neighbourhood boards, elderly clubs and sport clubs. Committees celebrate once a year an Ordinary Assembly which is the main body for consultation and decision-making in which all members participate.

In spite of their legal difference, APR cooperatives and committees work in similar territorial contexts with low population density, medium to high population concentration and with similar connectivity, communication, and transport issues (Perspectiva, 2011). The monthly fee they charge their members for water tariffs covers operational, administrative, and maintenance expenses and does not consider investment recovery as this investment is done by the State. The APR programme website states that the first stage of the APR programme was implemented between 1965 and 1970, and it is estimated that 153 of these cooperatives are still operative today. From 1976 and with the implementation of the second stage, cooperatives were replaced by committees after the enactment of Law 19,418 on Neighbour Boards and Community Organisations in 1997. I asked the Leader of Community Development within the APR programme, who worked with the Federation leaders on the drafting of Law on RSS, why cooperatives were replaced with committees. She explained that when socialist president Salvador Allende was elected in 1970:

The IDB withdrew their financial support to sabotage the government. One of the most important strategies to do this was to withdraw all funds for public investment [...] Between 1970 and 1975 those 153 cooperatives were left to their own devices, with no advice or support. The infrastructure was abandoned and in 1975 the loans from the IDB were re-established with the condition that no cooperatives be formed. Another model had to be created. Cooperatives had a political connotation for the IDB and the Bank was distrustful of associativity and of the socio-political vision of the Allende era as all agricultural cooperatives formed between 1960 and 1970

were the product of land reforms (Interview with Leader of Community Development, APR Programme, Santiago).

The (lack of a) legal framework

As explained earlier, Law Decree N°382 established the rules for urban sanitary companies. However, rural areas and some urban sectors were left outside the operating areas of private sanitary companies and were exempt from the concession system. This was because rural services did not have a self-financing capacity which made them unattractive to private companies (Villarroel, 2013). A recent study indicates that APRs income depends on the water tariffs they charge to their partners and that the larger the APR, the greater their income (Fuster, Torres, Avendaño, DESCOOP, & Sanhueza, 2016). As a result of population growth in rural areas, sanitary companies have become interested in taking control of larger APRs and have tried to buy some of them, as I will later explain (Villarroel, 2013). This is one of the reasons why the Federation was interested in creating a law (Law on RSS) that would protect the community water management model from privatisation. Since the beginning, APRs have worked without a specific legal text regulating their work. As a result, APRs have had to comply with the requirements applied to urban sanitary services, until a specific legislation is created for the rural sanitary sector, which is what 2nd temporary article in Law Decree N°382 states (Interview with APR Programme Director, Santiago). Moreover, the same Decree allows private sanitary companies to build and exploit drinking water systems ‘...in rural areas as long as the quantity and continuity of the public sanitary service⁶³ is not compromised’ (Law Decree N° 382, art. 52b). As I will explain in more detail, these two articles are fundamental for the legal existence of the APR Algarrobo-Viejo. In an interview with the Audits Manager from SISS in Santiago, I learned that:

the application of the law [Law Decree N°382 on Sanitary Services] to the concession sector is a lot stricter, we can't ask the same from the APRs [...] the rural sector needs a regulation that takes

⁶³ ‘Public sanitary services’ is a concept used to refer to those concession areas (usually located in urban territories) where private sanitary companies provide drinking water and sanitation.

into account their condition of rurality. We can't apply the same requirements to them because they would crumble (Interview with SISS Audits Manager, Santiago).

The reason for this difference between sanitary companies and APRs is because APRs are not professional water delivery companies, and thus cannot be expected to work as sanitary companies. Thus, APRs are subject to some concessions and exceptions when assessed by the SISS. In terms of regulations related to the physical, chemical, and bacteriological properties of water, both rural and urban drinking water systems need to comply with Chilean Norm 409 (INN, 1984). However, as I learned from interviewing people in charge of monitoring water quality at the MINSAL, fines are rarely applied to APRs as this would only be detrimental to their work and because their economic capacity is limited. I also learned that in terms of public health, it is preferable that people have water of lower quality than that requested by the norms, than not having water at all (Interview with Officer from Department for Environmental Health, MINSAL, Santiago).

Within Law Decree N°382, the 2nd temporary article allows for the creation of Technical Units (from now on "TUs") which provide technical advice to APRs. These functions are allocated to each sanitary company operating in each one of the 15 regions of the country. As the name of the article indicates, this provision is "temporary" and it is supposed to work until a specific law for the rural sanitary sector enters into force, which would be Law on RSS. However, this Law although passed has not yet entered into force.⁶⁴ Thus, this temporary article has been in place for more than 30 years since the creation of Law Decree N°382 in 1989.

The APR Programme Director for Coquimbo explained that because the APR programme has no law regulating its operation it does not have its own budget. Other public infrastructure such as bridges and highways, have clearly established channels for funding, which is not the case for the

⁶⁴ Even though Law on RSS was passed in February 2017, its regulatory frame has not been agreed upon and thus, the Law is not yet operative.

APR programme. The country's annual Budget Law from DIPRES⁶⁵ (2019) indicates public resources for APR projects should be allocated to the DOH.

Hugo: However, the DOH does not have enough staff to implement the APR programme and the only way was for the DOH to outsource this function to sanitary companies. Private sanitary companies are basically one per region, so they agreed among themselves that each sanitary company would stick to the region they already were operating in so they wouldn't compete against each other. Calling for a public tender process was no longer necessary as each regional DOH began to work directly with the sanitary company in each region (Interview with APR Programme Director, Coquimbo).

Hence, the sanitary company in charge of providing technical advice to all APRs operating in Coquimbo region is "Aguas del Valle" (AdV), which is at the same time the provider of drinking water and sanitation to urban areas in Coquimbo.

Funding sources

Depending on its size and population density the rural sector, APRs can be divided into "clustered", "semi-clustered", and "scattered" systems. Clustered APRs have at least 15 houses per kilometre of pipe network and a population of more than 150 inhabitants. Semi-clustered systems refer to those that have a density of at least 8 houses per kilometre of network, whereas scattered APR systems are those with less than 8 houses per kilometre of network. In clustered localities there is almost 100% drinking water coverage, whereas the building of new APR systems takes place in semi-clustered localities. I learned through fieldwork interviews that these initiatives include a "collective" solution for villages instead of a house-to-house approach to water needs. Depending on the cost of collective solutions, water tankers may be considered especially for isolated populations where a proper APR system might not be economically

⁶⁵ Acronym for *Dirección de Presupuesto Ministerio de Hacienda*, which translates as Budget Directorate from Treasury.

justified (MIDESO, 2015b). On the APR website⁶⁶ there is a document describing ways in which APRs can access different State funds such as “*Fondo Nacional de Desarrollo Regional*”⁶⁷ (FNDR) or “*Fondo Presidente de la Republica*”⁶⁸. This document describes public funds as:

mechanisms for resource allocation where citizens are given the responsibility to define and implement what they consider necessary in order to improve their quality of life. Access to funding is an important tool for social organisations, making them participants in the development of the country (DOH, 2019c, p. 1).

As this quote shows, people in rural areas are expected to apply for funds to design and implement drinking water projects.

I will now turn to describe the geographic and socio-economic conditions of the area where my ethnography began.

The scene

The Committee where I was welcomed to conduct my fieldwork is called “Algarrobo-Viejo”. This APR committee is located 10 kilometres east of La Serena city in the Elqui river valley, in the region of Coquimbo (figure 2).

⁶⁶ Please visit this website for more information:

http://www.doh.gov.cl/APR/documentos/Documents/fondos_foncursables.pdf

⁶⁷ National Fund for Regional Development

⁶⁸ President of the Republic Fund

Figure 2: La Serena commune and Coquimbo region



The map shows the region of Coquimbo and its administrative divisions. Coquimbo is divided in three provinces (Elqui in the north, Limarí in the centre and Choapa in the south) each one of them subdivided in communes with their own municipality. The APR Algarrobo-Viejo is located in the Elqui Province and within it, in the commune of La Serena.

According to the limits of the municipal regulatory plans, everything located outside the plan is considered rural. Regulatory plans are planning instruments showing where investments in drinking water, sewerage and electricity are allowed. Rural areas are, however, left outside these regulations.

This geographic area is part of the semi-arid north of Chile, also known as *Norte Chico*, located south of the Atacama desert (Fiebig-Wittmaack et al., 2012). It is characterised by low precipitation with high year to year fluctuation, with scarce rainfall concentrating between May and August (Fuentes & Campusano, 1985). Future changes in climate variability are predicted to have important consequences for water availability in arid and semiarid regions where water is essential for agricultural activities and livelihoods (De la Maza, Lima, Mserve, Guitierrez, & Jaksic, 2009). Drought periods seem to be increasing and future predictions for 2011-30 and 2046–65 show trends to higher minimum and maximum temperatures as well as lower amounts of rainfall (Fiebig-Wittmaack et al., 2012).

Agricultural development in Coquimbo has been improved, despite water shortage. The use of technology in agricultural practices have allowed for the exportation of wine, fruits and the development of tourist activities. The region has a total land area of 4,061,600 hectares of which 39,000 are urbanised while 162,000 are used for agricultural purposes. The great majority of the land are prairies and bush (BCN, 2017).

The 2017 national survey estimated the total population living in La Serena commune was 221,054 of which 20,414 people live in rural areas (BCN, 2017). The proportion of the commune population who self-identify as native peoples was more than 9% with 3.4% declaring their origins to be Diaguita and 3% self-identifying as Mapuche (BCN, 2017). The region of Coquimbo shows a rate of illiteracy of 2.7%, similar to the national percentage. The percentage of people who have not completed school education is 41.2%, similar again to the rest of the country. Within the commune of La Serena a total of 3,486 people self-declared as illiterate in 2002, representing 3% of the commune's population (BCN, 2017).

However, poverty indicators for 2017 show that figures for both income-based and multidimensional⁶⁹ poverty are higher in Coquimbo when compared to the country levels, with

⁶⁹ The multidimensional methodology to measure poverty identifies households which, independent from their income, experience different needs in terms of dimensions of wellbeing such as education, healthcare, social security and house conditions (MIDESO, 2016).

12% of income-based poverty and 22.6% of multidimensional poverty. La Serena commune shows slightly better figures when compared to the rest of the communes in the region, probably because this commune is more urbanised than the rest of the region.⁷⁰ Income-based poverty in La Serena is 10.3% compared to 8.6% at the national level, and multidimensional poverty is 20.2%, similar to the national figure. The Gini coefficient for this region, which reflects how income is distributed in a territory, is 0.45, showing important levels of inequality (MIDESO, 2015c).

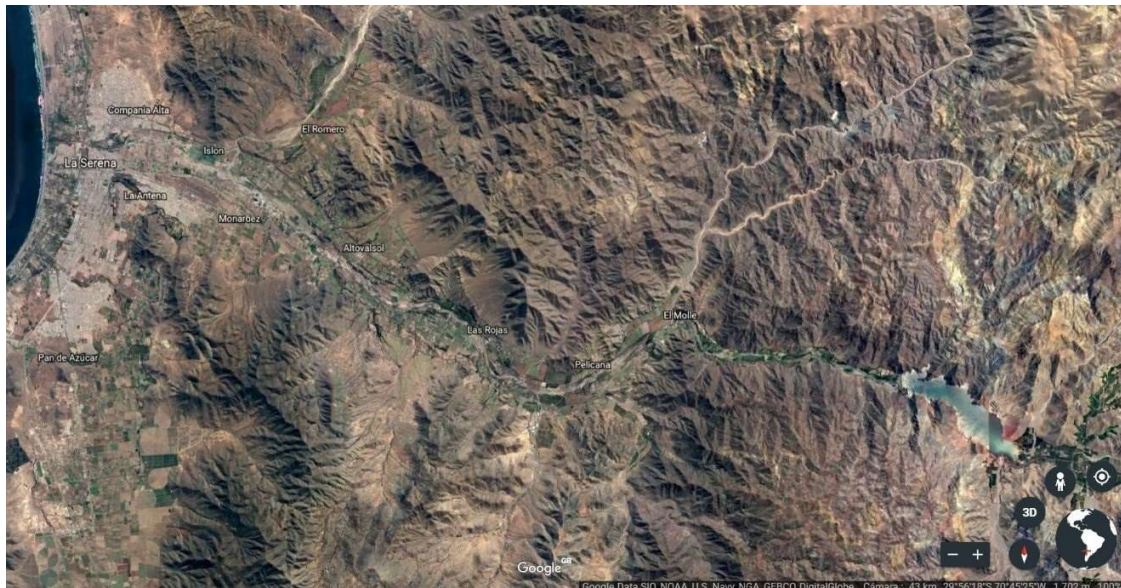
In terms of extractive economy, agriculture is the main source of income, with mining being in second place followed by metal and non-metal manufacture industries (BCN, 2017). The largest activity in La Serena is the construction industry with the highest number of workers (BCN, 2017). In relation to housing, Coquimbo shows a deficit of 14,257 houses, which is thought to be the main cause for overcrowded households. The percentage of medium overcrowded households for the commune of La Serena is 17.9%, whilst the percentage of critically overcrowded households is 1.28% (BCN, 2015). In terms of water supply sources for rural households within the commune of La Serena, out of 5,784 total households, 2,840 get their water supply from a private sanitary company. This shows the presence of sanitary companies as drinking water providers is extending towards rural areas. From the rest of rural households, 1,262 get their water supply from water tankers while 1,147 get water from a well while 465 get water from a river, stream, canal or lake. This shows an important reliance on water tankers as a source of water for rural households which coincides with what I was told by an Officer from MINSAL. Out of the total amount of rural households (5,784) only 1,580 have access to sewerage systems (BCN, 2017).

⁷⁰ Urban populations are less poor than rural populations when measuring both income-based and multidimensional poverty. A study shows the national figures for these two measures are 10.2% and 18.8% for urban populations and 22.1% and 35.2% for rural populations (MIDESO, 2015a, p. 20).

Algarrobo-Viejo

The Committee Algarrobo-Viejo is located in the Elqui river basin, which determines the geography of the area. The basin is formed by fluvial terraces and flood plains in which human settlements have existed for centuries while cultivating agricultural farmlands. The different water courses that feed this river are born in the Andes and its river mouth is in the Pacific Ocean at the latitude of La Serena city as seen in figure 3.

Figure 3: The Elqui Valley and Puclaro reservoir to the right



Source: Google Earth

At the top of the basin there is a glacier, the only one in the whole catchment area and where the water from the river comes from. This is a “controlled” river with two reservoirs, one called La Laguna and a more recent one called Puclaro which was built in 1999 by the State (Zavala-Zunino, Trigos-Agüero, Munizaga-Antequera, & Mall-Rojas, 2008). The river waters and the management of Puclaro reservoir are the responsibility of a private organisation called “*Junta de Vigilancia del Río Elqui*” which distributes water rights to its members according to the number

of litres per second (lt/sec) they are entitled to. *The Junta de Vigilancia*⁷¹ exploits and preserves the use of communal infrastructure including Puclaro reservoir, water canals and water intake works among other tasks the Water Code ascribes to them (Zavala-Zunino et al., 2008). I will describe this organisation in more detail in Chapter 4.

Algarrobo-Viejo is composed of rural villages which were shaped by the land reform process occurring during the 1960s and early 70s where family owned agricultural lands were subdivided in smaller patches. The sector of Algarrobo-Viejo is currently facing an urban expansion in the form of land subdivisions for agro-residential purposes in what is called “leisure patches”⁷² which would usually have an area of 5,000m². Route 41 joins La Serena with the Elqui Valley, a tourist destination known for its vineyards and pisco⁷³ plantations, astronomic observatories and a mountainous geography towards the Andes.

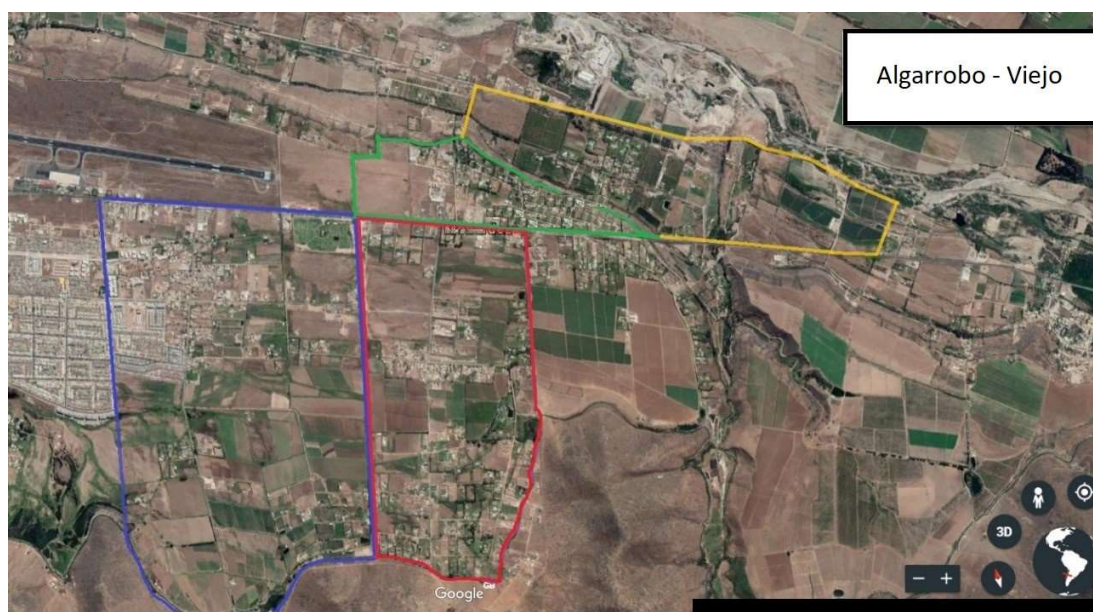
The figure below shows four polygons. The blue one represents the area of Viejo which was the original village where the Committee was funded. Although Viejo is still part of the APR and the houses located here receive their water supply from the Committee, this sector became “urban” due to the expansion of the urban limits set on the Municipal Regulatory Plan. The red polygon is what is known as Algarrobo, an area that was later added to the original Committee in Viejo. To the north of Route 41 and represented by a green polygon is the area of northern Algarrobo. To its right and in yellow is the area of Arrayán, the neighbourhood composed of 34 families who have been recently incorporated into the APR and whose standpoint my research adopts. These four polygons represent the total area supplied with drinking water by Committee Algarrobo-Viejo.

⁷¹ Surveillance Board.

⁷² In 1980 Law Decree N° 3,516 allowed people to subdivide rural lands and sell them. The law required these properties to be located outside urban limits and that the resulting lots were not less than 0.5 physical hectares. The purpose of this was to solve a problem that affected the assignees of the land reform who in the absence of financial and technical support decided to sell their lands under usually very unfair conditions and migrated to the nearest city.

⁷³ A grape brandy common in Chile and Perú.

Figure 4: APR Algarrobo-Viejo



Source: Author, based on information provided by APR staff

In terms of the Committee, there are 563 registered members of which 543 are heads of their household and 20 correspond to small businesses. There is one local school, a church and a few neighbour organisations. From the 543 total households, 298 are represented by male members and 245 by women. The people in this area work in extensive vegetable and fruit plantations, some have goats and other farm animals. These lands used to be of communal property but have been gradually sold for residential use due to their strategic location from the city of La Serena.

Changes in this area's geography and land use are recalled by Juan, a man who has lived in Coquimbo region all his life and who recently moved to Arrayán. He explained:

the river was an oasis, they used to take us here on school trips to see the woods of Chañares and there was flora and fauna in the valley around the river. All of that is dead now, they stripped the hills off and planted vineyards and other things. That happened from the 70s onwards, that was when everything changed (Interview with Juan, Standpoint informant).

As explained by Juan, rapid changes have occurred in the rural landscape from the 1970s which coincides with the rise of Pinochet's era and the neoliberal policies imposed, amongst which the Water Code was essential in promoting industrial activities that were thought to give an economic boost to the country.

The life conditions of the Committee's members vary greatly as the sector is inhabited by family groups living in old colonial buildings within relatively large extensions of land, as well as social housing equipped with electricity, telephone access, rural drinking water services and septic tanks. Wastewater is either disposed through septic tanks (474 households) or cesspits (20 households) whereas 8 houses have no wastewater system at all. In terms of the houses material conditions, 24 people declared their houses to be in "bad" conditions, 87 were considered to be "regular" and 415 in "good" conditions.

In terms of occupation, 97 Committee members work in the trade sector including plumbers, electricians and machinery operators. The second group includes professionals such as lawyers, teachers, architects and engineers. The third largest group is composed of housewives, whose monthly income is either non-existent or below minimum wage. Pensioners make up for nearly 10% of the members followed by only 14 farmers and 6 miners. Most workers are permanently waged, but an important proportion of the labouring class is made up of seasonal workers who are employed in wine production or who work on the picking and packing of exportation fruits. Another activity in this area is aggregates extraction, which is the collection of sand or gravel from the river to be used in construction. As shown on figure 4, this activity is visible to the north of Arrayán in grey and white shades.

In terms of members income, the information the APR holds shows that the average monthly salary is around CLP⁷⁴ \$500,000 which is approximately US \$731 dollars. This amount is above the minimum wage which in Chile amounts to \$288,000 (US \$447) per month. For a reference on

⁷⁴ Chilean pesos.

prices, and what this actually means for people in the area, it is useful to consider the monthly cost of the basic food basket. As mentioned in a document by MIDESO (2019c), the cost of the basket is based on prices from 2012 and it was set at \$31,000 (US \$46) per person, and \$137,500 (US \$202) per average household (of 4.4 people). If we consider other expenses such as rent, which in this area costs approximately \$100,000 room per month, we can see that the minimum wage does not leave much room for utility bills, clothes, tax, health and other expenses. Other sources set the price of the basket at \$67,000 for 2019 (Marketing for Commerce, 2019), which would imply that more than 33% of the household minimum wage goes to food alone.

In summary, this area is highly diverse in terms of education, poverty levels and source of employment. As mentioned earlier, there is an unequal distribution of income within this area, which is more accentuated than the country's average. In terms of its landscape, there have been important environmental changes driven by an economy based on extractive activities such as industrial agriculture and mining.

Committee set up

Algarrobo-Viejo was created in 1995 under Law 19,418 on Neighbourhood Boards and Community Organisations (Ministerio del Interior, 1997). It originally included 79 *arranques* and a 40m³ elevated water tank, which currently does not comply with safety norms (Interview with President Algarrobo-Viejo). The elevated water tank has been an iconic symbol of the APR programme since its origins, included in the APR programme logo as shown in figure 5, next to which is the actual elevated water tank from Algarrobo-Viejo.

Figure 5: Algarrobo-Viejo elevated water tank and APR programme logo



Source: APR logo from DOH website, photograph is the Author's.

The APR logo organises an understanding of APRs across time and space. This logo carries specific meanings about APRs for those trained to read them and it structures a common understanding of 'the purposeful interactions of groups, including such things as hierarchies of authority' (Warren, 2014, p. 125) and the positions of water access and delivery in other social organisations such as the economy, as I will explore in subsequent chapters. This Committee is currently composed of 543 members who have paid a membership to become partners of the APR. The membership currently costs CLP \$750,000 and in addition to this, 5 UFs⁷⁵ need to be paid for the water meter (a total of approximately US\$ 1,200). When talking to national leaders and DOH employees this figure seemed to them an extortionate amount as members of other APRs usually pay between CLP \$30,000 and \$120,000. This is one of the things the new Law on RSS would be regulating, as membership fees are currently decided internally by each APR.

As a result of population growth in the area, the Committee has had to look for ways of expanding its infrastructure in order to provide newcomers with drinking water. An additional semi-buried water tank of 75m³ was added a few years ago to the system. This tank, however, is now not

⁷⁵ *Unidad de Fomento* is a unit of account used in Chile which on 6th March 2019 is US\$ 39.92.

enough which is why the Committee at the time of my fieldwork, was implementing the “Improvement and Extension project” (I&E project). The purpose of the I&E project was to build a new semi-buried water tank of 100m³ together with the replacement of an existent 75cm-diameter pipe for a 160cm one, to allow for the connection of 74 new *arranques* to the water system. The project also included the construction of 1,584 additional meters of pipeline.

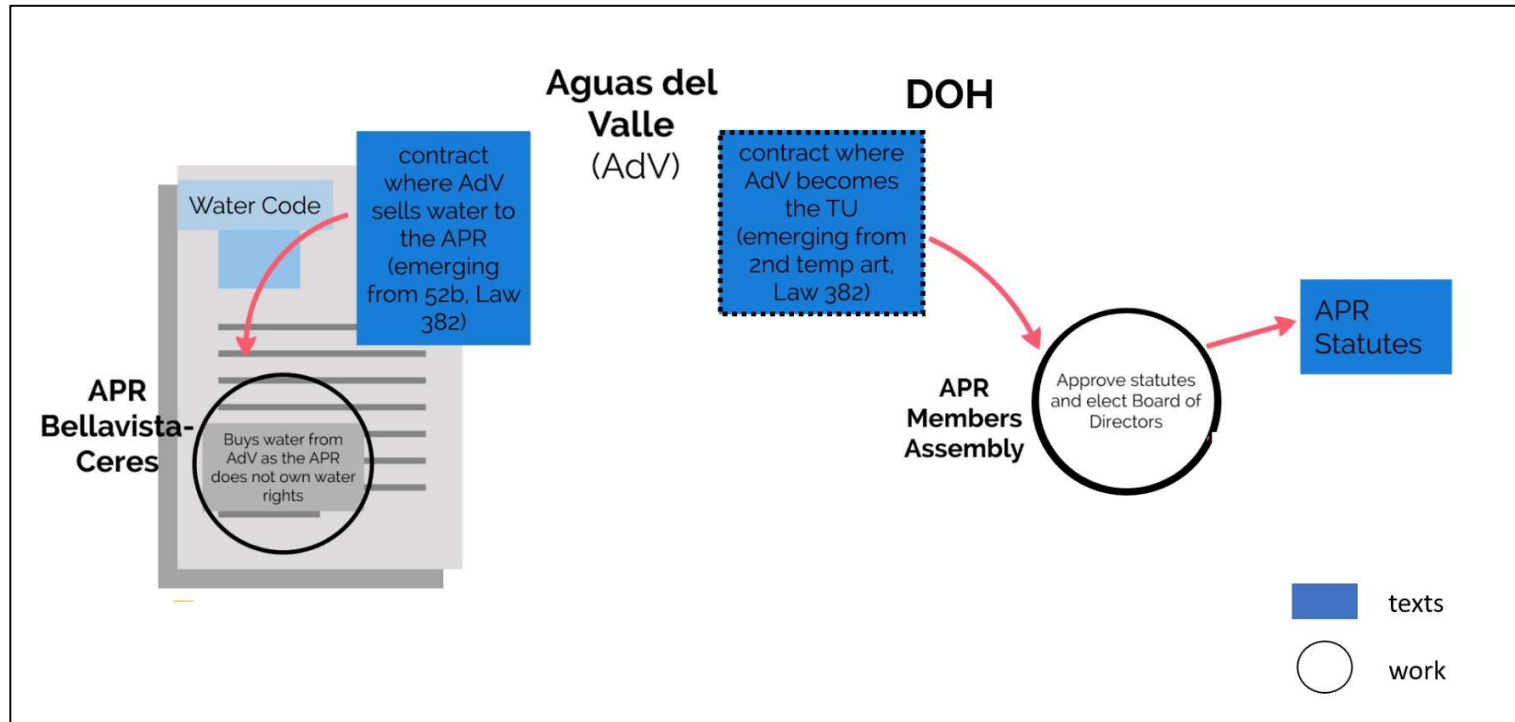
The Committee’s objectives are to manage, operate, maintain and expand all infrastructure and to replace equipment and installations when required. In order to do this, the Committee has been given a document —the Committee Statutes— as a suggestion from the Technical Unit (TU). The TU provides the same statutes template to all APRs in the region. These statutes were modified and adapted to this particular APR and were then voted and accepted by the members. As mentioned earlier, the TU in this region is “Aguas del Valle”, the sanitary company operating in all urban areas within the region and which provides technical assistance to the 189 APRs in Coquimbo. The details of this arrangement are specified in a contract signed between the TU and the regional DOH which I requested but was not able to see as it was deemed to be a private document. I was told some of the TU tasks included regular visits to the APRs and capacity building workshops. In this regard, article 39 of the Statutes reads:

Advice, supervision and assistance will be carried out preferably in the field and will be addressed to the members of the Board of Directors and workers, covering all matters related to the system’s community management necessary to achieve the optimal operation, administration and maintenance of the Committee (Algarrobo-Viejo, 2003, p. 15).

The new Law on RSS proposes to dissolve the contract between the DOH and the TUs and devolve this advisory role to the DOH, as it was the case before 1989. As the main purpose of the Committee is to deliver drinking water to households, access to the required amount of water is essential. The way in which this Committee obtains water is through a “52b contract” stemming from Law Decree N°382 and its article 52b, as the APR does not hold water rights of its own.

Figure 6 illustrates the organising role Law Decree N°382 plays in the work of the APR. This is the main text behind the organisation of the APR as the contract between the DOH and AdV stems from its 2nd temporary article. Another important text is the “52b contract”, stemming from article 52b from the same Decree. This is a contract between AdV and the APR by which a commercial relation is established and whereby AdV sells water to the Committee (an example of this contract is included in Appendix One). The 52b contract is needed because the Committee does not own enough water rights to produce drinking water to all the member partners. Although not immediately visible, the Water Code regulating the property and management of water in Chile, is present through the 52b contract revealing the organising presence of the system of water rights in which the Committee is an active participant as a buyer. Figure 6 also shows the APR Statutes, which have been adapted from a template provided by the TU. The work of the member’s assembly has included the modification and acceptance of these Statutes, which are the rules by which the APR operates. The members of the APR meet once a year in a general assembly where they discuss and decide on matters related to the management of the Committee. The Board of Directors is democratically elected every three years and is responsible for making decisions on behalf of the Committee, following the assembly’s advice. When delving into the ethnography, I will explain in more detail what articles “2nd temporary” and “52b” from Law Decree N°382 mean for the work of the APR and its member partners.

Figure 6: Law Decree N°382 as organiser



Source: Author

In Algarrobo-Viejo, the Board of Directors is formed by Mariana the president, Iván the treasurer, Felipe the secretary and two additional directors: Gaspar and Cristóbal. They are all volunteers and none of them receives a salary for their work. The president is the person obtaining the highest number of votes, as stipulated in the Committee Statutes (Algarrobo-Viejo, 2003). The second highest number of votes determines who the treasurer is, and the third highest determines the secretary position. The president and the treasurer are in charge of signing cheques and legal documents. The president is the judicial and extrajudicial representative of the Committee. Directors must keep a record of their meetings and a list of member's attendances to the general assembly. Their duties are specified in the Committee's Statutes (Algarrobo-Viejo, 2003, p. 8) and on documents published on the DOH website (DOH, 2019a).

The Board of Directors meets at least once a month with a minimum of two directors although the president must always attend these meetings (Algarrobo-Viejo, 2003, p. 8). The Directors must select and hire a manager who will in turn hire a team of workers. The members of staff at the time of my fieldwork were led by Ana, the APR manager. There were two administrative workers based in the office: Susana and Tamara and three operators: Don Martín, Don Luciano and Camilo who were in charge of the technical aspects of running the system and spent most of their time outside the Committee's office. The manager and the members of staff receive a salary from the Committee for their work.

The Board of Directors must ensure the 'good functioning of the system, implementing the work needed to maintain, replace and improve it, encouraging the adequate use of drinking water through controlling any leaks and improper water use' (Algarrobo-Viejo, 2003, art. 28). The Board can suspend water services when a person's payment is delayed by more than 60 days. They can also sanction a member if they have been stealing water by making what is known as "*bruja*" connection⁷⁶. This means that the water does not go through the water meter, but instead goes straight into their property. Another example of water theft is when people turn the water meter around, so instead of going forwards, the meter stays in the same place, which makes it look as

⁷⁶ "*Bruja*" in Spanish means "witch". This is an expression that refers to illegal and unregulated connections to the mains, in order to access drinking water without paying for it.

if no water has been consumed. Water thefts often happen, some in lesser quantities than others, but they occur most months, as it was explained to me by Tamara. The following section is an example of an 'ethnographic snippet', an idea I have borrowed from Eastwood (2019, p. 86) who uses rich descriptive fragments to transport the reader back to the local site. I use these in the hope to better communicate where the actual happenings I focus on, take place.

Origins

During my time in the Committee Algarrobo-Viejo, which began with an initial two month stay, I had the opportunity to speak to different members of the Committee. I went to the local sports hall at 3pm where five women from Viejo Neighbour Organisation were sitting around a table working. They were mothers and grandmothers, and some of them had been born in Viejo, the sector where the Committee Algarrobo-Viejo was formed. Two of the women had arrived from the city a few years ago. I spent the afternoon with them crafting Christmas decorations, although it was only October. They were using felt, cardboard, beads and silicone sealant guns that worked only when the electricity allowed for, which was intermittent that afternoon. I joined them while they crafted Father Christmases on winter clothes, which seems inappropriate for our southern hemisphere Christmas when the average temperature is usually around 30 degrees Celsius. They told me about their lives in Viejo and I learned about the origins of this APR in the midst of a martial arts class that took place in the same sports hall at 5pm.

An agricultural cooperative⁷⁷ was formed in Viejo during the land reform period. This cooperative was composed of 30 members who were given land and water as means of production for their own consumption. As one of the women explained, the previous owners were Italian families who had large *fundos* but they did not work the land, so President Frei Montalva through the Agrarian Reform Law divided the *fundos* into smaller patches and gave them to the people. In

⁷⁷ This was not an APR, but a cooperative by which people got access to land as means of production under the political and economic changes in the 60s and early 70s part of the Land Reform process.

order to apply for a patch of land, people needed to register in the CORA⁷⁸ and pay for the land by instalments. The women considered their parents involvement in the cooperative as a good investment, as they got to be owners of their lands. Lía explains,

People did not need to buy any vegetables anymore because if they lacked something maybe their neighbour had it, so they would exchange food products among themselves. Land patches weren't closed like they are today, they were internally communicated so you could go everywhere, and nobody would tell you off.

When they were young, they helped their parents work the land to grow lettuces, potatoes, cabbage, maize and peppers, among other produce. They would clean the land, and plant seeds after removing stones, brunches and twigs. It was all done by themselves and it was hard work. The members of the cooperative would sometimes have enough products and would sell what they produced to make some money. Everyone had 10 or 12 hectares of land and a little veggie patch for their own consumption. In relation to water, Bea mentioned:

we used to go to the Canal Algarrobo with jerrycans and we would get water and bring it to our houses. Then, we would use a jar, like those old ones, to bathe. It was more difficult than today but we were used to it. It was nice. Most of the people would go to the Canal on a Saturday morning to wash their clothes. My mum would take the wooden punt and we would spend some time there. She would wash the clothes and we would rinse them.

Someone else added that people would drink water from the Canal as it tasted good, and it was clean, so no-one ever got ill. They told me how the cooperative members became the funders of the first APR system, which consisted of two water tanks to which they attached hoses in order to deliver water to each one of the land patches. As they told me their stories, a hint about the way water is organised came up:

⁷⁸The CORA was the Agrarian Reform Corporation created in 1962, a State-owned company in charge of subdividing lands within the process of the Agrarian Reform. It was later dissolved in 1978 and replaced by the Agrarian Normalisation Office which existed until 1979 and whose main objective was to "normalise" the process initiated by the previous socialist governments and to put an end to land expropriations.

Some people still have “shares of water” from the Canal but other people have sold them already together with their land. If you have to cultivate the land you need the water but if you don’t want the “shares” you can sell them.

I was told people do not work the land as much anymore as there has been a reduction of water in the Canal due to several droughts and people often sell their lands and shares of water. Some of the changes these women and their families have witnessed in this area are illustrated in the following conversation:

Bea: In 2004 it was still possible to see people with their little animals and people would take them to the hills for pasture. Now old people rent their lands or houses out and their children who are educated, they work in the city. People have sold their lands to a company that has bought most lands in this area. With just a little bit of land they make many flats.

Lía: People who buy these flats are usually pensioners and families who want to move into the countryside and who are looking for a better quality of life. They buy the so called “leisure patches”.

Bea: Yes, there are also camping sites around this area, and other people rent spaces for big events. That’s a big problem as they have swimming pools and they use the water from the APR to fill them up, so the APR wastes a lot of water on this. It is allowed as long as people pay for it. But they should be paying for a water tanker if they want to fill their swimming pool instead of using drinking water to do it.

Lía: Last year one of the women from our organisation paid \$100.000 for a water tanker to fill her swimming pool, she says is cheaper than the water from the APR.

Carmen: Yeah but the women who fill their swimming pools with drinking water are those with money, the ones that live up there. But the ones who end up paying the consequences are us as Bea says, because the water pressure goes down and we don’t get enough water here. That must be the reason why in summer we have low water pressure, mustn’t it? You can’t get hot water as the boiler won’t fire up.

This chapter illustrates the historical, political and socio-economic context in which the APR programme rose. The *cuestión social* and the solutions proposed to tackle it promoted the

installation of an export-oriented economy based on agricultural production and mining activities that took place in the Chilean countryside. The rural land reform promoted by socialist governments, and the Water Code endorsed by a right-wing dictatorship, were the policies applied in the countryside to stimulate land productivity. The ethnographic snippet included illustrates the current situation in the local setting, where a mix of land uses coexist as legacies of the historical processes taking place in rural Chile. The next Chapter narrates the beginning of my ethnography and the discoveries that led me to the selection of the standpoint informants. I adopted their experiences as the starting point for my exploration into the institution of rural drinking water management in Chile.

Chapter 4: Entering the local setting

This Chapter describes what I learned in the initial stages of fieldwork⁷⁹ and explains how I chose the research standpoint informants. I pay especial attention to the efforts of people from Arrayán whose need for water had repercussions for the work going on in the APR demanding time and work from APR directors, staff, and partners. I describe the first disjuncture experienced by one of the standpoint informants which relates to the social organisation of water rights, and which I explain in the following Chapter.

I gathered data following the instructions of Campbell and Gregor (2002): in-depth interviews, participant observation, field notes and textual analysis, as texts in IE are how social relations are crystallised. I took an approach to interviews as “talking with people” but with a purpose in mind. I wanted to understand the work they did in relation to community water management. I wanted to understand every step of the process for which I needed to check I was getting things right. I returned to the Committee in December 2018 to talk with some of the participants and ask for their feedback on a product of my research: a map of the ruling relations at work in the I&E project process.⁸⁰

Finding the local setting

Although I was born and raised in Chile, I did not have natural access to the local site (Suarez-Delucchi, 2018). My first challenge was to find a rural community in which I could begin my exploration. As I am from Santiago, I did not have a deep knowledge of rural Chile or APRs. The brother in law of a friend from the university where I studied Geography knew Felipe, who was a member and treasurer of Committee Algarrobo-Viejo. Felipe asked the rest of the board of

⁷⁹ My fieldwork took place between September 2017 and March 2018. For more details on interviews conducted during fieldwork and events attended, please refer to Appendix Four. I use pseudonyms to anonymise participants in this study, excluding those who are public figures.

⁸⁰ This map and its textually mediated sequence of actions are explained in Chapter 7. I describe each one of its components in detail in Chapter 9.

directors for permission on my behalf and they allowed to spend time in the Committee, were I was immediately welcome. I was able to observe the work people were involved in and to learn from them what rural drinking water management was about (Suarez-Delucchi, 2018).

The first conversation I had with Ana, the manager of the APR, and Mariana, the president, took place in Ana's office and marked a turning point in my research. I asked Ana and Mariana whether they had participated in the drafting of the Law on RSS and whether they had worked together with the Federation. When they answered: 'what Federation?' I realised I was being part of the ruling relations as I was reproducing what I have learned from official accounts and what I thought to be the "true" story about the Law on RSS and about the Federation. As explained in Chapter 2, "ruling relations" is one of the main concepts in IE and what we identify and make visible. These are specialised complex of objectified forms of social consciousness by which individuals are controlled. However, individuals participate in them through their everyday activities in coordination with the activities of other individuals located elsewhere and elsewhen. I had assumed the story I read on the media was the "true story" about the new Law and the widespread participation of APR leaders. Algarrobo-Viejo was one of the largest committees in Coquimbo and I thought the leaders of this APR had been involved in the law-making process, or at least had been consulted. This initial discovery made me question whether I was in the "right" APR and whether I might need to leave Algarrobo-Viejo and go to an APR whose *dirigentes* had either participated in the creation of the Law or were at least connected to the Federation. It took me a day or two to realise this was an interesting discovery, and that I was already learning something about the official story I had read. Although Ana and Mariana had a printed copy of the Law, they had never heard of the Federation. This discovery gave way to a more specific focus as I paid attention to the daily work practices people were involved in, instead of forcing an exploration of the law-making process. I remembered I was there to learn about people's work practices and their everyday/everynight activities as I heard so many times in an IE workshop⁸¹ I

⁸¹ I attended a week-long workshop run by Susan Turner and Dorothy Smith in July 2017. This workshop took place at the Ontario Institute for Studies in Education (OISE), in the University of Toronto. This workshop included presentations on IE's underpinnings and two one-hour sessions with Susan and Dorothy to discuss my research project with them.

attended in 2017. I engaged in conversations, was invited to board meetings, and helped the members of staff in whatever ways I could. I spent the first few days getting to know Tamara and Susana, who worked in the office. I also met some of the members who would visit the offices and others whom I talked to when on the grounds with the operations team composed by Don Martín, Don Luciano and Camilo (Suarez-Delucchi, 2018). I realised the members of staff were not informed about the new Law on RSS and were instead busy with more pressing issues such as delivering water to APR members, fixing leaks and pipe breakages, dealing with contractors, answering complaints and dealing with costumers, among other tasks. A few days after my arrival to the Committee, Tamara and Susana suggested me to join “the boys” who left early every morning on the APR truck. I saw how the three operators were constantly solving issues arising from the negligent work of a contracting company called “Oper Plant” (OP). This company was implementing the I&E project, but their work was generally defective, and Don Martín spent several mornings fixing the problems OP would create. The work practices within the APR revolved around the I&E project, and this became the actual core of my ethnography. The I&E project would reveal aspects of a wider organisation that relied on institutional texts that had very concrete impacts for the work people were doing in the APR and for those who were requesting water access.

The standpoint

As noted earlier, my initial plan was to explore the institution of community or rural drinking water⁸² from the standpoint of an APR. I was clear in that I was not beginning from the standpoint of the DOH, nor from the Federation’s or its leaders. I wanted to begin from the bottom and then work my way up into the institution. I assumed my inquiry would be anchored in the work practices and experiences of Committee workers as this looked to me like the bottom of the institution. As I became more familiar with the work of the APR members of staff and directors, I realised much of their efforts were directed at solving problems arising from the I&E project

⁸² Community water management or rural water management are used interchangeably as this is how people refer to the work done by the APRs and how their work is described in official texts.

implemented by Oper Plant and supervised by the Technical Unit: Aguas del Valle. The main objective of this project was to improve and expand the capacity of the Committee's water system so that more families could get connected to the mains and receive drinking water in their houses.

After a week in the Committee, I learned there was a group of people who had been pushing for the I&E project. They were the people from Arrayán, an area to the north of Route 41 (Map 2), composed of 34 families who requested access to drinking water from the Committee. These people saw their request denied as the capacity of the system at that time was not enough to include an extra *arranque*. Consequently, they became active in the development of this project as it would provide the infrastructure needed to expand the capacity of the APR system. As mentioned in Chapter 1, none of the official documents I had read before going to the field began in the experiences of those who were not members of the APRs but who needed access to drinking water. Instead, the accounts I read started either from the standpoint of the Federation, people who were members of APRs, or the State.

The analytic thread I follow in this dissertation is materialised in the I&E project application and implementation process I detail in Chapter 7, and which starts with the experiences of the people whose standpoint this research adopts. The standpoint is a stance that has an empirical location within a complex regime of institutions and governance and the practices that construct this regime are the ultimate focus of an Institutional Ethnography (Rankin, 2017a). Those practices are the ruling relations⁸³ which, although created somewhere else are often activated by people in the standpoint or local setting. The procedures producing the implementation and construction of the I&E project in Algarrobo-Viejo, which would make possible water delivery to the people in Arrayán, took place through various textual practices. Sequences of textually mediated activities, which I will describe in Chapters 6 and 7, coordinated the work of people in

⁸³ As mentioned before, this is one of the main concepts in IE and it grasps power as a complex of organised practices that regulate, organise and direct, including the government, law, business, professional organisations, educational institutions and discourses that interpenetrate the multiple sites of power.

Arrayán, the work of the Committee's staff and directors, as well as the work of government employees and politicians in the region and at the national level, over a period of five years.

Although I arrived at the Committee when the I&E project was almost completed, I was able to reconstruct its process from its beginning to its implementation. I gained this knowledge by talking with people who were involved in this five-year-long process beginning with the standpoint informants, and through my exploration of texts activated by people in different sites of the APR institution. I relied on people's expert knowledge of how their work is done, the texts they activated and the people they liaised with. I followed the clues they gave me and talked to the people they suggested me to talk to understand how the frustrations experienced by standpoint informants were organised.

As I mentioned when explaining the underpinnings of IE, people know about their world both ideologically and materially. Ideological ways of knowing include the use of theories and explanations people hear, read, or know about discursively and which they use to explain their work practices and problems. In addition, people also accumulate knowledge through their experiences of what happens in their lives. Oftentimes these two forms of knowing are incongruent and produce a disjuncture between an objective way of knowing the world and an experiential, bodily and subjective one. Those disjunctures are rooted in the experiences of standpoint informants and this is where my exploration into the extra-local setting began. The organisation of the disjunctures stemming from the experiences of Juan, Fito and José are explored in Chapter 5 and 8.

I will now turn to the material description of the experiences of Juan, José and Fito who needed water and who engaged in a series of activities to fulfil their needs before they finally requested water to the APR. The accounts I write reveal what standpoint informants know and experience about accessing water in a rural area. Their accounts are written to find traces of ruling relations within the descriptions they made of their everyday work. These accounts are then complemented with talks I had with Committee members of staff and directors.

The experience of people from Arrayán

I met José and Fito in several occasions as they visited the APR offices regularly to talk to Ana and Mariana. They were part of the “Community Organisation of Eastern Arrayán”, a group of 34 families who organised under Law 19,418⁸⁴ (Ministerio del Interior, 1997), the same Law by which the Committee Algarrobo-Viejo was created. The Arrayán community organisation was created to achieve common goals such as installing cameras to prevent thefts, getting street lighting, and paving the main road. However, the most pressing issue for them was to get access to drinking water. The purpose of this section is to describe the conditions by which standpoint informants came to learn about the drinking water processes they needed to engage with to get water. These families are mostly newcomers who bought patches of land in a rural area as they were looking for a better quality of life after retirement. They were unaware of the aspects of the organisation of rural drinking water they then became experts on.

As they were building their houses, they realised they did not have access to drinking water. The ways in which they initially obtained water was through superficial wells or *norias* they would dig in their own lands, or from water they accessed from Canal Chañar⁸⁵. This option required them to have “shares of water” which would allow them to access a certain amount of water on a specific day of the week, which would be delivered into their field by the Canal managers. They would also get water by water tankers which would come once a week to fill an elevated water tank bought and shared between the neighbours.

I met Juan when I went with Don Martín and Ana to his land where he had built a house and planted fruit trees. Don Martín was trying out the new water connections so that people from Arrayán, like Juan, could have tap water in their land. The connections were unreliable as Oper Plant had made several mistakes when installing the new pipes in Arrayán and connecting them

⁸⁴ Law on Neighbourhood Boards and Community Organisations.

⁸⁵ I will explain the organisation of Canals and water rights in Chapter 5.

to the mains. All these mistakes had delayed the water supply and the delivery of the I&E project by more than 5 months.

Juan explained to me he bought that patch of land and paid a bit extra for 0.5 “shares of water”⁸⁶ from the Canal, which he used to water his trees and plants. Juan and his wife had tried to use some of this water for their domestic activities, except for drinking purposes, as this water was not potable and would have needed filtering and chlorination to be safe for human consumption. As he did not have a sophisticated filter, when they showered with the water from the Canal, they realised they ended up smelling of grass. He also bought water tankers from the Municipality for domestic uses, and jerry cans from supermarkets or local shops for drinking purposes.

Juan: I was paying so much for water: CLP\$ 46,000 (US\$ 67.50 approx.) to fill up my 5,000 litres water tank which lasts one month, when it’s only the two of us. But when my sons and grandchildren come the water runs out very quickly as there are 15 of us in total [...] I was determined to dig for water, but then I thought: where do I dig? I didn't dare in the end because each meter of digging costs CLP\$ 124,000 (US\$ 180), and what if I dig 30 meters and I don't find water? I lose money! And then miraculously, this project came up, we’re so happy now (Interview with Juan, Standpoint informant).

Juan is referring to the I&E project. However, this did not occur “miraculously” as he says. For this project to come about, the people who founded Arrayán’s community organisation had to do a great deal of work. José explained that before this project was designed, he drew water from a well he had dug in his land, which recently became dry:

José: The water mirror was 18 metres deep, then it went down to 19, then to 20, and after that it simply collapsed and I was left without water [...] I asked the Municipality for water tankers and they said they were only for poor people [...] then, a mining company came and dug 5 wells around this sector and pumped around 280 lts/sec, although they have “a right” to pump 320 lt/sec. As

⁸⁶ I later found out that 0.5 shares of water in this river translate into 0.5 lts/sec of water, however this is not always the case as it depends on calculations done by the *Junta de Vigilancia* which manages the Canals and water distribution in each river (interview with Felipe).

they drew water away, most of the superficial wells in this area became drier and drier (Interview with José, Standpoint informant).

Due to the activities of extractive industries in the area, water is becoming scarce which is aggravated by droughts and drier conditions. The Arrayán community organisation requested drinking water services from AdV but they were told they needed to sign a “52b contract”, which is the same contract the APR Algarrobo-Viejo currently has with this sanitary company. However, José explained that such a contract would have been too expensive for them. Not only would AdV have provided them with “raw water”, which they would have had to filter and treat, but they would have had to pay \$1,000,000 (US\$ 1,500) per household to get a water meter. The “52b contract” requires private sanitary companies to ensure water services to urban areas will not be interrupted in case of an emergency, which leaves rural populations in a vulnerable position. At the time of my fieldwork, the people from Arrayán were accessing drinking water from a superficial well in Nicanor’s land. This person oversaw the water chlorination, and each member of the organisation paid a fee for electricity and machinery replacements. As Fito mentioned: ‘it works like a mini-APR’.

Who does this well belong to?

An interesting conversation between Fito and José developed when I was talking to them and it is related to the ownership of the well the neighbours of Arrayán were using:

Fito: We have the water rights registered in the name of the Arrayán community

José: I didn’t know that. So, the well is registered under the name of the community?

Fito: Yes

José: I’m not so sure about that, because if the well is in Nicanor’s property, he should be the owner strictly speaking

Fito: Well, I don’t know...

José: Because what is built on a piece of land belongs to the owner of the land

Fito: It is registered

José: Yes, but under whose name? Is it Nicanor's?

Fito: Look, I don't know, but it doesn't matter

José: But this is not an issue because as I mentioned before [talking to me] there is a lot of solidarity here and a lot of sharing and the well on his [Nicanor's] land, we take the water and transport it up the hill and there is a tank there, where we gather the water and through gravity we distribute it to people's houses...

This discussion provides a glance into the larger organisation of water in Chile, which I will explore in more detail in the next chapter. This organisation is based on “water rights” which are measured in “shares of water” and which give water right owners the right to use a specific amount of water. For now, I draw attention to the fact that property is deemed important in this conversation as it would allow for legal and secure access to water. Fito and José continued discussing the characteristics of this well and they mentioned it is not apt for drinking purposes:

José: You know that to make water potable it's not enough to add chlorine; besides we don't know how the well will behave in the future and it could fail us anytime. And then, what do we do?

They explained that every month they monitor the well's water quality to check the concentration of nitrates, sulphate, chlorides, arsenic and faecal coliforms, among other parameters. In general, the water they are drinking complies with Chilean Norm 409 for drinking water (INN, 1984), although the concentration of arsenic is slightly above the norm. They believe this will not be the case when they get water from the APR, which might be because they know APRs need to comply with the norms. However, as explained earlier, the MINSAL prefers APRs to slightly not comply with the norm rather than leaving people with no water.

According to the water monitoring these neighbours carry out, the well in Nicanor's land is also drying up. This is the reason why the community decided that joining the APR would be a better and more sustainable solution to their water needs.

In summary, people from Arrayán had five legal options to access water:

1. To hold water rights that would entitle them to use water from the Canal or from a well in their land⁸⁷
2. To buy jerrycans or bottled water for human consumption
3. To buy water tankers
4. To sign a “52b contract” to buy raw water from AdV, which would have to be filtered and purified. This was not a viable option as it was too expensive.
5. To join the nearest APR in the area which was Committee Algarrobo-Viejo.

All these alternatives link people from Arrayán to wider institutional arrangements for accessing water in Chile. The institution for drinking water is closely related to the regime of “water rights” and “shares of water” regulated by the Water Code. For example, the first option, requires people to have “water rights” from the Canal, implying the ownership of a certain number of litres of water which can be purchased from another person owning water rights within the river system, or inherited. Water rights can be granted for free by the DGA if there are “shares of water” available in the river. José explains that if the well is superficial they do not need to own water rights, as long as the well is in the person’s land and as long as it is used for human consumption. This is what José was doing in the beginning, until his well dried up.

The second option implies establishing a commercial relation with the private companies selling drinking water in plastic bottles or jerrycans. These are usually private companies based in Chile although there are also international brands available in the market. A recently published study (Daniele, Cannatelli, Buscher, & Bonatici, 2019) assessed the chemical composition of ten brands of bottled water sold in Chile, and found that 30% of the samples showed values of arsenic above those permitted by Chilean drinking water regulations, WHO standards and the United States’ EPA guidelines. This reveals an inconsistency between permitted levels for bottled water and

⁸⁷ According to the current Water Code people can dig for water in their lands only when it is for drinking purposes and as long as it does not affect other water right owners. One of the modifications proposed to the current Water Code adds to this article, the right for APRs to use acquirers in their land or to dig in the lands of one of its members, or in State owned lands, as long as it has permission to do so (DGA, 2018).

those accepted for drinking tap water. The authors conclude that some of the brands analysed should not be used for drinking purposes, which poses an additional problem to the issue of drinking water in rural areas.

The third option involves buying water from water tankers which implies buying water from AdV, as this is the company selling water to water tanker companies in the region (Interviews with Officer from MIDESO in Santiago, and Officer at ONEMI's Municipal Department in La Serena). This sanitary company owns sufficient water rights to sell water not only to urban citizens and various APR systems such as Algarrobo-Viejo, but also to water tanker companies which are used to provide water to rural scattered communities.

The fourth option, which is to sign a 52b contract with AdV would be extremely expensive for the people from Arrayán. The water used through this option would have come once again, from AdV.

Ultimately, all options revealed by Juan, Fito and José show it is crucial to have some sort of ownership over water resources. When ownership is not possible, people can buy water from those who have it. In any case, having economic resources to access water is essential. Water ownership in Chile is legally expressed in the Water Code as a "right of advantageous use" which I will later explain (Ministerio de Justicia, 1981, art. 6). As I realised from talking to people in Arrayán, as well as in the talk of APR members of staff and directors, the Water Code presence was clear, especially in a conversation with Juan that suggested a disjuncture that reappeared in conversations with other members of the APR:

Juan: Why is water private when it is a right? I don't understand that, I can't get my head around this. [...] Now everything is privatised [...] The government gave *water rights* (emphasis mine) to the *Canalistas* and there are like 2 or 3 men who own like 70% of the waters. So, the little man who has a tiny patch of land, ends up with no water.

Juan's disjuncture relates to the knowledge people in his position within the institution experience in relation to access to water. People's knowledge is shaped by their experiences but also by abstract and conceptual understandings. The idea of the human right to water works as

an ideological code as it is reinforced by people differently located within the institution and is written in a specific United Nations declaration (UN, 2010). Ideological codes are found across settings and coordinate how people talk and hook in several ways into policy or political practice. However, this ideological code does not seem to have many expressions in actual settings as there is no clarity as to how this human right should be put into practice.

I found a letter archived in the APR office where a neighbour had been requesting access to water for three years without success. The letter mentions that ‘this vital element is guaranteed in our Constitution as a human right’. Although water is not stipulated as a right in Chile’s Constitution (MINSEGPRES, 1980) this letter reveals an understanding that it should. Such is the case that even Mariana, the President of the APR, has stated the same idea in a letter she wrote to the regional DOH where she states that ‘access to water is a citizen’s inalienable right.’ This shows a common understanding of water as a basic human right.

Whichever way Juan may know about this, the “human right to water” seems in contradiction with the idea of “water rights”. When participants moved into abstract talk, I paid close attention as these abstractions provide clues into a larger organisation beyond their experiences and locations. The following excerpt shows an ideological account of the institution of water management and more specifically of “water rights”, as expressed by the manager of Algarrobo-Viejo:

Ana: This is absurd, water is a property of all Chileans. But this is a national scale issue. Mining companies have polluted all the waterways. They get water without any obstacles while us, like underdogs, keep screaming and kicking because we are not a priority. The issue of water should be managed by the State, how long will this be going on for? Monies come from abroad and we give them priority, and we keep giving them priority, and every day we are being more crashed. This is what happens with Aguas del Valle, they have the monopoly. They are foreigners, they are Canadian, and what do they know about our reality? They come here and take all the utilities with them; this *system* suits them. If I had money I could go to another country and do the same. But the one who needs to defend us Chileans is the State. Enough of this! And the same thing happens

with electricity, with water, with everything, these are monopolies. (Interview with Ana, APR Manager).

This is an interesting glance into the way in which Ana and Juan perceive the “system” ruling water access. In Ana’s view, water should be managed by the State implying someone else is managing it. My aim is to show how this is organised so that it seems like an “absurdity” and unfair for “the little man” as Juan puts it.

I know the Water Code is the main text organising water ownership and access in Chile and therefore, the experiences of people at the local setting. I learned about this legal text when I did my Geography degree however, I realised not everybody in the local setting knew about the Water Code or recognised it as such. Nonetheless, they knew it did not work on their behalf.

The premise that ‘a well-formulated research problematic is key to a coherent analysis in IE’ (Rankin, 2017a, p. 3) encouraged me to describe those occasions when people’s knowledge and experience is at odds with what professionals and policy makers know about accessing water for drinking purposes. This professional knowledge extends beyond the talk and work practices of people at the local setting to an ideology dominated by conceptual models of water rights, efficiency, and water markets.

The first disjunctures arising from Juan’s experiences with water necessarily focused my work on other people’s knowledge and doings, people who do not occupy the standpoint. I delve into Juan’s first disjuncture in the next Chapter. This disjuncture is foundational to the building of the problematic and will help me analyse the institutional discourse of “community water management” in Chapter 9. In the following Chapter, I describe the organisation of water rights in Chile, drawing on some of the main tools IE provides for textual analysis: the text-reader conversation, facticity, and inter-textualities.

Chapter 5: 'Why is water private when it is a right?'

The construction of “water rights” and how these are managed to create differential access to water sits uncomfortably with standpoint informants’ experiences of accessing drinking water, which they regard as a basic human right. This is the first disjuncture I encountered, and the puzzle Juan wants to understand. This chapter explains the social organisation of what has already been legally established as “water rights”, uncovering how this complex of social relations happens among real experiencing individuals – some of them are doing and benefiting from ruling and some of them are being ruled. Here I show how water, a natural feature of Chile - is turned into a commodity that can be sold and used for private profit.

Smith understands discourse as a regulatory frame⁸⁸ that leads people’s understandings as well as their activities and which underlies assumptions prevailing in local settings. In this analysis, I use the idea of ideological circle to explain how the concept of “water rights” structures the way people talk about water, revealing aspects of the organisation of rural water delivery which are not entirely visible from within that location. This is present in people’s experiences of water ownership and delivery and in their perception of this organisation being unfair, creating additional work for the APR manager and directors. The facticity of water rights as official and authoritative reveals the power of an organisation which not only regulates access to water for industrial activities, but also drinking water for human consumption. As described in Chapter 4, these facts organised the work of people in Arrayán including their request for water from the APR.

Another IE analytic device I use in this Chapter is the text-reader conversation, a process in which institutional discourses and codes regulate people’s activities in a local setting, translating the actual into the institutional (Smith, 2005d) and erasing actuality. The reader plays both parts in

⁸⁸ I use the term frame as described by Smith (2005c, p. 191): ‘the wide varieties of conceptualizations, theories, policies, laws, plans, and so on that operate at a general level to structure institutional action and reality coordinating people’s work at local levels’.

that conversation as the text is fixed, and the reader needs to activate it. I will explore this in relation to the making of water rights as facts and other properties of the Water Code.

In this Chapter I also look at texts and their relationship with other texts. Smith refers to intertextualities to explain that an institutional text or the way people talk can lead to a boss text or a discourse that trickles down and through multiple settings, institutions and people (Smith, 2005c). In this way, regulatory texts are performed in local settings as people refer to their specific terms such as “water rights” or “shares of water” but these concepts do not ‘stand alone. They are specifications of and are responsive to regulatory texts that authorize and subsume the local particularities resulting from the work of translation’ (Smith, 2005c, p. 199). This performance works to spread an interpretation of texts becoming an ideological code based on the authority of a regulatory text as well as on the interpretations people make of them while performing texts in local settings. Regulatory or boss texts (Griffith & Smith, 2014, p. 12) regulate other texts and operate in intertextual hierarchies, providing clear lines of command in which lower-level texts must fit into the concepts established by the regulatory text (Smith, 2005). This works in a similar fashion to ideological circles where actuality must fit into such regulatory categories to be actionable and recognisable within the institution.

To use these three analytic devices in exploring the construction of “water rights” I will describe the work of people situated in the extra-local setting and whom I interviewed while I was still in Coquimbo region. The work these people do relates to water allocation under the instructions of the Water Code and was instrumental to my understanding of how water is organised in the Elqui river.

The social organisation of water rights

Felipe is one of the APR directors and the treasurer of Algarrobo-Viejo however, his full-time job is at the *Sociedad Nacional de Agricultura*⁸⁹ (SNA) where he works as the manager of Canal

⁸⁹ National Society for Agriculture. As I mentioned in Chapter 2, the SNA was one of the strongest opponents to the Agrarian Reform implemented by Frei and Allende in the Chilean countryside between 1962-1973. Currently, and as

Algarrobo. I learned in a lengthy conversation with Felipe in the offices of the SNA in La Serena, about the way in which water rights are organised in a canal system also referred to as the “fish spine”; alluding to its shape. My knowledge of the canal system was later complemented with an interview I had a couple of months later with Fernando Peralt Director of the CONCA⁹⁰, in Santiago.

I learned Canal Algarrobo is composed of 3,000 members called *regantes*⁹¹ or *canalistas* who form a Canal Association. The *regantes* can be “natural people” (individuals) or “legal persons” (entities) such as real estate, mining or sanitary companies, as well as APRs and agro-industries, among others. Canal Associations are organised as stipulated in the Water Code:

when two or more people have water use rights on waters belonging to the same canal, reservoir, or use the waters of the same acquirer, can make official the community existing by virtue of this fact and organise a canal association or any other kind of society in order to take the waters of the main flow, distribute them among the right owners, build, exploit, preserve and improve collection works, aqueducts and other works needed. When the waters are from a natural flow, they will be able to organise a *Junta de Vigilancia* (Ministerio de Justicia, 1981 art. 186).

The largest water management organisation in the Elqui River is the *Junta de Vigilancia* (Surveillance Board) which is composed of 125 canals of which Canal Algarrobo is one. Each canal is composed of several *comunidades de aguas* (water communities), which distribute water to each member according to the amount of water rights they own. The *Junta de Vigilancia* allocates water to each canal at junctures called *bocatomas* from which water is directed to each one of the *marcos repartidores* (delivery frame) within the canal, where there is a *celador*. The *celador* opens and closes the sluices and distributes water among the *regantes* within a *comunidad de*

explained by the Leader of Community Development within the APR Program at the central level, the SNA strongly opposes the attempts to modify the Water Code.

⁹⁰ *Confederación Nacional de Canalistas de Chile* in English, Chilean Confederation of Canalists.

⁹¹ A *regante* is a person who waters or irrigates. It is usually used as a synonym for irrigator or farmer who owns water rights which he/she uses to produce the land.

aguas according to a *turno* (shift) system, and in the quantity each *regante* is entitled to. When the sluices are opened the water flows to each patch of land irrigating the fields. People can accumulate this water by pumping it to water tanks, or they can let it flow to water their trees or crops, which is what Juan does with the 0.5 shares of water he receives from the *marco repartidor* “Arrayán”, within “Canal Chañar”.

As the manager of Canal Algarrobo, Felipe oversees the state and cleaning of infrastructure works among other tasks. He explains there are 21 *marcos repartidores* within Canal Algarrobo, each one of them with a *comunidad de aguas* with their own board of directors and statutes. As if this was not complex enough, I learned that within each *marco* there are *sub-marcos*. Most importantly, Felipe calculates the distribution of water rights within Canal Algarrobo according to what the *Junta de Vigilancia* suggest each year. The *Junta* assesses each year how much water there is in Puclaro reservoir and works out the “reductions” they need to apply in order to allocate water to each *regante*. An ideal situation would occur when there is enough rainfall or snowfall in a calendar year and the river is full, so that 1 share of water would be equivalent to 1 lt/sec.

The Elqui river is divided in three sections, the first river section has 12,000 shares, the second section has 2,000 and the third section is divided in 10,150 shares. However, 12,000 shares of water are not always equivalent to 12,000 lt/sec especially in drought periods when the river carries less water than “it should”. The amount of water available in each section is distributed to the canals in terms of the “reductions” estimated each year. Each Canal then distributes the water it gets from the *Junta de Vigilancia* between each one of the *marcos repartidores*, also in accordance to the “reductions” for that year. Water is distributed once more within each *marco*, and then to each *regante* who would get a *turno* with the corresponding shares of water. Reductions are almost always applied and certain measures are taken to save water:

Felipe: some reservoirs and canals are covered with a liner, so water loss is reduced, as we already lose a lot of water through evapotranspiration. From a total of 100 litres you can lose up to 40, so if we covered all the canals we would be saving more water (Interview with Felipe, APR Treasurer).

I asked him about the natural process of water infiltration into the ground, as if we were to cover all canals with a liner, aquifers would not refill and would become dry. To this, Felipe replies:

Felipe: Well, that's how APRs and the people using wells are *profiting* from the water that infiltrates from the canals (Interview with Felipe, APR Treasurer).

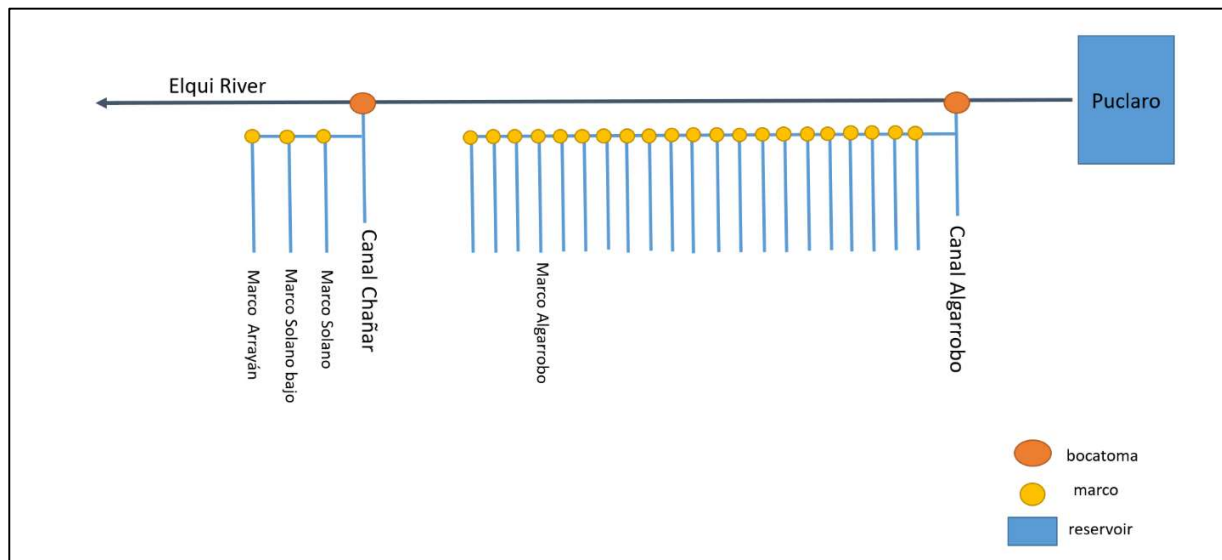
When I asked him what he thinks about the 'minimum ecological flow'⁹² modifications to the Water Code introduced some years ago, he says:

Felipe: The reform to the Water Code which seeks to preserve an ecological minimum flow makes no sense in this region. It's been twenty years since the flow was altered here by a reservoir, so nobody knows what the ecological minimum flow was. There might be species already long extinguished (Interview with Felipe, APR Treasurer).

After this interview with Felipe I realised that the portrayal of people in APRs as a homogenous group in favour of community water management and opposing the privatisation of water was a discursive practice to erase difference and a more complex story. How could Felipe, being himself a representative of the Board of Directors and a member of Algarrobo-Viejo, be against the modifications to the Water Code under such homogenising views? This was not something my knowledge from media and government accounts would have accounted for. Felipe continued explaining how the water right allocation system works in this basin, and drew a diagram to illustrate the fish spine:

⁵ In 2005 a modification to the Water Code was introduced and the DGA was allocated the responsibility to 'ensure the preservation of nature and the protection of the environment, by establishing a minimum ecological flow, which will only affect new rights' (Ministerio de Justicia, 1981, art. 129 bis 1). This consideration would only apply to new water rights and not to those already granted.

Figure 7: Elqui river “fish spine”



Source: Author

This diagram shows the river Elqui regulated by Puclaro reservoir which is managed by the *Junta de Vigilancia*. Additionally, the diagram shows how different canals emerge from the river. The largest of the canals shown here is Canal Algarrobo, subdivided in 21 *marcos repartidores* one of which is *marco* Algarrobo, with a total of 71 shares of water. Only 1.6 shares of that total is owned by Committee Algarrobo-Viejo, as I found out when speaking to Ana. However, these are not enough to cover the Committee’s demand for drinking water, and therefore the APR needs to buy 18 m³/sec from AdV through a “52b contract” (Annex 1), which enables the Committee to produce drinking water and deliver it to its members. According to Felipe, although the APR could buy more actions from other people, there is no website in which to find out who is selling shares or how much they cost. This is something people must find out through word of mouth. Felipe explained that when there is “water availability” in the river people can request water rights to the *Dirección General de Aguas* (DGA). However, he said there are no water rights left in this river

as “the catchment is closed” which means that all superficial⁹³ water rights have already been allocated. The only way to get water shares at this point is to engage in a transaction and buy them from someone else. The owner of the water rights will have to register his/her rights in the *Conservador de Bienes Raíces* (Real Estate Office) of the council where the *bocatomas* are located. The information on how many water rights a person owns is supposedly written on the *Catastro Público de Aguas* (Public Waters Record) which is archived in the *Conservador*. As described by Felipe and as stated in the Water Code, the DGA is the State body that registers the constitution of *comunidades de aguas* but does not register the constitution of water rights. When people come together to form a *comunidad de aguas*, they must register on the DGA’s *Registro Público de Organizaciones de Usuarios* (Public Record of User Organisations) which gives them access to several benefits. For example, they can ask the DGA to interfere in disputes among *regantes* and allows them to fine those who are not paying their membership bills. Other benefits that the legal constitution of a *comunidad de aguas* provides is the possibility for its members to access public funds for irrigation projects or water infrastructure. Being part of a *comunidad de aguas* even allows its board of directors to ask for public force interventions if needed. All *marcos* within Canal Algarrobo pay a monthly fee which is where Felipe’s salary comes from. If a *marco* does not pay their fee to the Canal, the Canal closes the sluices at the *bocatoma* and the whole *marco* stops receiving water. Similarly, if the Canal does not pay the administration fee to the *Junta de Vigilancia*, then the *Junta* interrupts the water supply to the Canal. In fact, conflicts are sometimes so serious that violent arguments are not uncommon:

Felipe: Conflicts are solved with fights, arguments, shootings, a bit of everything, but at the end of the day the system is respected and it works, it is a frail balance though [...] Despite of all these anecdotes the system in general works very well [...] The problem is that the DGA should have more attributions, more staff to supervise water thefts. There is always theft as people use water for longer than they should which depends on the internal management of each *marco* and what the *celador* needs to do (Interview with Felipe, APR Treasurer).

⁹³ Superficial and underground waters are described in the Water Code as ‘terrestrial waters’ as opposed to maritime waters. “Superficial waters are those naturally in view of man and which can be flowing or steady” (Justicia, 1981, pg. 1).

It becomes clear from this interview and from article 186 of the Water Code, that only those who own water rights can join a *comunidad de aguas*, canal association and/or *Junta de Vigilancia*. However, it is necessary to have registered the water rights on the *Catastro* in the *Conservador* before joining a *comunidad de aguas*. Felipe mentioned that many of the original water right owners have died or have sold their rights to people who have not registered them under their name, so the *Catastro* is not up to date. A recent document called *Radiografía del Agua* (Radiography of Water) seeks to identify territories within Chile with potential lack of water and in risk of social, environmental, and economic damage in terms of water availability and quality. This document, funded by the World Bank generates inputs for ‘the elaboration of concrete cost-effective solutions to achieve desired water scenarios’ (Escenarios Hídricos 2030, 2018, p. 6) and it recognises the limitations of the *Catastro* and the need for more accurate information as ‘this record only registers 20% of the legitimate water use rights’ within the country (Escenarios Hídricos 2030, 2018, p. 34).

In fact, the *comunidad de aguas* of *marco* Algarrobo is not legally constituted and neither are some of the canals within the *Junta de Vigilancia*. Although Canal Algarrobo was legally established as a Canal Association in 1963, the fact that the APR is not registered as a water right user within *marco* Algarrobo means the information of Canal Algarrobo is not up to date, which is what Felipe presumes. This makes it difficult to know how many water rights are already allocated in the river, and how many are available for other people to buy or request from the DGA, which is an important problem for legally accessing water.

Juan’s conversation

After talking to Felipe, I visited Román, the treasurer of *marco* Algarrobo. He was not aware the APR had bought a few shares of water as this was not registered in his books. I wondered whether there was a way to know who uses the water shares the APR is not currently using. However, this was not possible as the APR is not even registered as a user. Román says that only 18 people are registered, but he has no information on who sold the rights to the APR or what changes need to

be made to update the records. He also complained about the *Junta* charging them a management fee but not informing them about what they did with that money. Román's complaints reminded me of Juan's experiences with the way the 0.5 shares of water were delivered to his land, a practice he had no say in and which was determined and produced by the *Junta*. This excerpt makes more sense to me after Felipe's explanation:

Juan: When we bought the land we paid a bit extra to get 0.5 shares of water, that's how *they* call them. But to water our trees is expensive because I need to use a pump. Before, they used to send the water down a ditch in that higher part [points to a little mound in his field] and all this area would get flooded, which is how the old folks used to irrigate their fields. But they stopped sending water through that ditch and now they send it this way [pointing to the lowest part of his field]. So, I have to raise the water with a pump because it does not come by gravity anymore (Interview with Juan, Standpoint informant).

Juan's talk refers to an organisation that is outside his own making and where he has no say. Juan refers to the shares of water as something inevitable, a feature that was there before he arrived to Arrayán and which is defined and organised in mysterious ways: 'that's how *they* call them'. There is a text-reader conversation here and although Juan is not actually reading the Water Code as he explains how he uses (or not) his shares of water, he is active in this conversation playing both parts. He is responding to a text that remains unchanged, unresponsive to the other party, which is also played by Juan as the reader who interprets and acts from this text.

Smith (2005d) explains that when the reader engages with the text through using its language and responding to it, the text starts occurring and comes into view. Smith is concerned with exploring texts as fundamental pieces of the social relations of public textual discourse. In this sense, the activity of the text depends on the interpretive practices of the reader, both (the text and the reader) being part of the social relations of ruling. The interpretation of that text depends on Juan's competence as a member who knows the interpretive practices and schemata of the text (Smith, 1990b). Other people might interpret this text differently as it is the case with Felipe, who thinks the Code and the arrangements it creates 'work very well'. Smith (1990b) explains

that if the interpretive practices of the reader are in line with the intention of the text, the analysis will reveal how the text makes sense. In this light, the world of water rights exists for Juan as a textual construction based on a construct where he had no say.

This is how the notion of institutional discourse operates as people's utterances in the text-reader conversation constitute "shells" that need to be filled with substance from actual experiences (Smith, 2005d, p. 112). In this case, Juan is making sense of the "shares of water" as the actual water he is entitled to use, and the institutional discourse provides the terms and instructions for how to read them properly. The text-reader conversation of institutional discourse replaces Juan's actuality for instances of legal and institutionally recognisable categories. People are substituted for categories such as "water right user" and actual features of nature such as water, are replaced by institutional accounts of events such as "shares of water". In her book *Texts, Facts and Femininity*, Smith analyses the construction of "facts"⁹⁴ (Smith, 1990b, pp. 12-51) which she describes as 'a type of noun that lacks specific content – for example, *thing, fact, reason*' (Smith, 2005d, p. 112) and which has to be filled by organising observations in accordance to specific instructions. I now analyse how "water rights" and "shares of water" are constructed as "facts", following Smith's guidance.

The making of "water rights"

Smith (1990b) provides detailed explanation of how objectified knowledge produces "facts" by erasing people, place, and researchers in order to appear objective, alienating the readers of these facts from their own experiences. In this way, objectified knowledge teaches people to distrust knowledge that emerges from personal experience and to recognise facts as "the truth".

The creation of concepts such as "water rights" or "shares of water" as stipulated in the Water Code, provides the owner of a "water right" with the right to use water in the quantity allocated

⁹⁴ These are also referred to as "shells", a term Smith (2005d, p. 112) borrowed from Schmid (2000) and which imply these terms need to be filled with clauses that obey to a text and relate to a particular sequence of actions.

when that right is legally granted⁹⁵. Furthermore, water rights are constituted as facts about the natural world and not only as facts about people's experience with water or about their need for water. For example, when there have been severe droughts in Coquimbo region superficial waters diminish to the extent where there is no physical water left in rivers. However, the disconnection between "facts" and place is such, that although some may own a "water right", they cannot exercise the use of that right due to the physical absence of water. An example of this occurs in the village of Petorca where there have been important conflicts over water between avocado producers and the local community. The APRs located in this area might own water rights but because the river flow is minimal or non-existent there is no physical water for them to use. The disjuncture also works the other way around. There can be enough water flowing in a river as a result of rainfall or snowfall in the mountains. In such cases, the flow of the river is evident, and people's sensorial experience tells them there is physical water available. However, because the water rights have already been allocated to other people there is no legal water availability left. This is what Felipe refers to when saying 'the catchment is closed'. He is talking about the legal availability of water which does not necessarily mean there is physical availability. In this regard, water has been institutionalised and managed in a way that creates a disjuncture between the water we see and the water we are not entitled to use. This disjuncture is acknowledged in *Radiografía del Agua* (Escenarios Hídricos 2030, 2018, p. 37) which reports that 'several of the aquifers and rivers currently "closed" present better conditions than those expected, in fact they do not present issues of overexploitation'. This makes sense as it relates to complaints by NGOs and society groups denouncing the problem of idle rights, which are water rights that people have but do not use. This means there is water that is "lost" and ends up in the sea without being used by those who do indeed need them. For example, Puclaro reservoir in the Elqui river catchment was full at the time of my fieldwork however, the APR did not have enough water rights and had to buy water from the sanitary company. The Committee's lack of sufficient water rights together with the lack of infrastructure to deliver drinking water to more houses prevented Juan from accessing drinking water. However, it is not possible to know with the

⁹⁵ Water rights can be bought from another person or allocated by the DGA. The latter is possible only when there is legal water availability and the rights have not been previously allocated to someone else.

information available whether there were or are idle water rights in the Elqui river catchment that could have been used by the Committee to provide water to Juan.

Inter-textualities

The facts I have explained here are part of an institutional course of action where the Water Code relates to other texts, as the notion of ‘inter-textual circles’ suggests (Smith, 2006, p. 85). For example, if Juan is interested in getting water rights from the river, he needs to go to the DGA and ask for the amount of litres per second he requires. If there is legal availability (independent of whether there is actual physical water or not), Juan would have to register his rights on the *Catastro* in the *Conservador*. For the Committee to be able to produce and deliver drinking water, it has to describe its water rights situation when applying to the I&E project (MIDESO, 2017) which means demonstrating physical water availability and the permission to access it, as I will explain in more detail in Chapter 6. This creates the need for people to do something to fit into instructions of the regulatory text. In the case of the APR Algarrobo-Viejo and because the Committee does not own enough water rights to provide water to its members, the Committee buys 18 m³/sec of water from AdV through a “52b contract” (Appendix One, article 1).

The “monopoly” Ana refers to is not only in terms of the existence of one sanitary company per region that can act as a Technical Unit. That monopoly also refers to the ownership of water rights in a quantity large enough to allow the company to sell drinking water to cities and to APRs through 52b contracts. Moreover, this monopoly extends to the provision of water to fill water tankers which are sold at market price to individuals and Municipalities. As I learned in conversations with an Officer at MIDESO, this is an unregulated business in which sanitary companies can charge Municipalities whatever amount they want which is what happened in the region of Valparaíso⁹⁶ where Petorca is located. As a result of this, the Ministry of Internal Affairs declared Valparaíso a ‘catastrophe zone’ (Ministerio del Interior, 2017) which allowed the

⁹⁶ The communes declared as catastrophe zones are La Ligua, Cabildo and Petorca, all of them part of Petorca Province in the Region of Valparaíso. The Province of Limarí and the communes of Salamanca, Illapel, Canela, Andacollo and La Higuera (all located in Coquimbo Region) were also declared catastrophe zones in 2017.

*Gobierno Regional*⁹⁷ (GORE) of Valparaíso to release emergency funds for Municipalities to buy water tankers (trucks) that are used to fill APRs' water tanks. Between 2010 and 2016 the State spent more than US\$ 135,506,800 on water tankers to provide water to more than 400,000 people (Arellano, 2017). In fact, a woman managing an APR in Petorca has been sued for water theft and taken to court as she manages an APR that does not have legally constituted water rights (Interview with Leader of MODATIMA). This is an important issue considering that more than half of the APRs in the country are using waters to which they do not hold water use rights, as I learned from speaking to DOH employees in Santiago. The relevance of "water rights" is that the social relations of water management organised by the Water Code are based on their constructed existence.

The *Canalistas*'s account

I visited the CONCA offices in Santiago where its president, Fernando Peralta, works. I wanted to understand how the management of water is organised at higher levels. In Peralta's view, the proposed modifications to the Water Code will not affect the fact that rights to use waters will be maintained as 'real'⁹⁸ property rights and that APRs would get a series of special provisions for them to access water and 'even when there is no water availability they will get water'. He does not explain though, how this will happen.

Peralta: It's not as if they [the APRs] didn't have these provisions before, they've always had them, we're not creating a new Code. In fact, article 27 of the Code provides the President the power to expropriate water rights to meet human needs (Interview with President CONCA).

⁹⁷ Regional Government.

⁹⁸ Article 6 of the Water Code states that the right to exploit or use water is a real right, which means water resources are of public property. In fact, water itself is defined as a *bien nacional de uso público* or "national property of public use" (Bauer, 2004, p. 641). However, the State may grant private rights for individuals to use such property. These rights are called *derechos de aprovechamiento* or 'private rights of use' (Bauer, 2004, p. 641). Thus, although it is a category of property owned by the nation as a whole and whose use belongs to all inhabitants, the government can grant permits or concessions to private parties for the exclusive use of such property. Despite this legal definition, the Constitution of the Republic strengthens private ownership of water through article 19, number 24 (MINSEGPRES, 1980).

Peralta thinks water for human consumption is thus secured through this article, and that expropriation is possible as long as there is political will to do so. In his view there is no need to modify the Code and the reason behind these attempts stem from a socio-political divide between a free market tendency and a socialist one:

Peralta: The socialist tendency wants all production goods in the hands of the State, and the other tendency, which is the one of development through free market mechanisms, which by the way has very bad press, says the State role is to oversee while leaving all the production to the private sector, which must have the property of production assets because otherwise it won't have the freedom to fulfil its role. So, the modifications to the Water Code as they are structured today, are very confusing. They contradict each other as it is the product of what these two tendencies have won or lost. They [people advocating for modifications] want the right to use water to cease by changing the word “owner” by “entitled to use” (Interview with President CONCA).

As this excerpt shows, there are two opposing speech genres, one which uses the words ‘entitled to’ and another one that focuses on water ownership. The speech genre I am part of in this conversation and in Chile as I drink water from the tap is grounded in a sphere of activities which is socially organised and carried in taken for granted concepts such as “water rights”. The term “water right owner” and the way in which it is organised to create concrete effects provide legal security to investors, according to Peralta. The Water Code embodies a speech genre that is very different to the language used in Law on RSS where the emphasis is placed in the social role played by APRs, community participation, and mutual aid (MOP, 2017, p. art. 66). This makes me wonder whether these two legislations can coexist, and about how they relate to one another. In Peralta’s view, people wanting to modify the Water Code use a different array of utterances and their objectives (the socialists’) are extreme as their ultimate aim, Peralta claims, is to nationalise water.

Peralta: those who manage water in a country have power and the goal of every politician is power. Because he believes that with power, he will be able to do great things for the good of the

whole country. Leaving a good as fundamental as water on private hands is not within what they seek (Interview with President CONCA).

Thus, he sees these modification attempts as creating the conditions to get to that goal. He says it is important to look at history as water privatisation was not created with this Water Code in 1981 but with the one created in 1951 which had already installed the “right to use water” which were suspended during the Agrarian Reform years. This right to use water was a right of property over water and people held it within their patrimony and was independent of the property of land. He also explains that Canal Associations were created in 1908:

Peralta: As those using water were those who had rights to use it, all the water management in Chile is based on water rights (Interview with President CONCA).

I immediately thought I was experiencing myself a disjuncture as he spoke, and I listened. I knew there were indigenous peoples living in Chile long before the water rights were invented⁹⁹. This is a property of institutional time frames whereby textual time situates the accounts in favour of the Water Code within the “shell” of Peralta’s account which is an official account as his authority is granted by the Water Code. Peralta’s account is based on an institutional frame created for water right ownership that otherwise might be considered a violation to the human right to water or as erasing the experiences of indigenous groups. The institutional rationale Peralta explains to me puts me back into the institutional talk he is basing his knowledge on. Juan’s experiences, as the experiences of indigenous people, are situated accounts that must be transformed or ignored, to fit into the world of the textual construct, with its commitment to a specific ideology. The temporality of ideologically constructed water rights subsumes the temporality of personal and local experiences where individual accounts are assessed against what was written seventy years ago and, on a legislation, where Canal Associations were created a century ago. Ideological ways of knowing remove people and individual experiences from their actualities making

⁹⁹ The modifications to the current Code consider some preferences for indigenous peoples in terms of their access to water such as art. 5, art. 129, 9 bis and other temporary articles (Carey, 2016).

situations such as the one lived in Petorca, a mere exception. The result of this process is that exceptions can exist but do not threaten the official story as they are seen as isolated cases that do not represent a failure of the textual construct. Peralta is instructing me on how to have a text-reader conversation where a course of action is validated in the “full story” of water rights. The water rights concept and the way it is used today draw from and shape what has been historically considered (in a discrete definition of history) as an appropriate way to manage water, projecting its structure into the future (Warren, 2014). The Water Code brings the past into the present and becomes an important organiser of collective efforts to provide drinking water to rural populations.

Smith refers to the text-reader conversation of institutional discourse (Smith 2005) to explain how social relations constituted in texts coordinate actual practices in courses of action. She explains how this works by looking at two texts describing the struggle between a local demonstration being held without authorisation, and local police officers in charge of cancelling it. Smith (1990) explores this local event in relation to a wider national discourse where Text A was written by a Professor and describes what he saw and felt as a local expression of excessive use of force by the police. Text A was published as an opinion piece on an underground newspaper. On the other hand, Text B is the Mayor’s response to the incident described by the Professor. The texts provide a different account of the local event. The Professor’s letter is described from a particular time and place in which he is a witness. However, the Mayor’s account is an organisational account and not an observation from one person’s experience; it appears as an objective report of events as part of an organisation that mediates between the reader and the Professor’s account. In text B, people are institutionally recognisable as categories of people: the “police” and a “juvenile”. These terms refer to extended organisational courses of action that expand the timeline of Text A to events before and after those witnessed by the Professor. These are essential in transforming the young man who was being treated unfairly and violently by the police, into a “juvenile” who happened to have a “police record”. This would explain why he was arrested, prosecuted, and pleaded guilty. These previous and following acts in the sequence were not known to the Professor, and his story is discredited by the Mayor’s official account which tells

the “full story”. Similarly, Peralta’s account about the State having given people water rights and establishing Canal Associations as the country’s water managers in 1908 is positioned within a broader institutional timeline. Oppositional views of the Water Code are situated as a moment, an event within a wider mandated course of action in which organisational properties are built into linguistic practices where activists’ accounts are subsumed as a local observation of an ongoing and extended sequence of actions.

I explained to Peralta that I had spent time in an APR in the north of Chile where people did not have water and had to buy it from a private sanitary company. I also explained the manager’s attempts to buy water from the Canal, and that they did not know where to get information about who was selling them, as there was no public information on this. However, he believes buying water is not necessary as APRs will always have water for their needs as water is ‘assured’ for human consumption as it only represents 5% of the water usage in the country. He mentions a few very specific cases in which APR problems have been solved with the *canalistas*’ good will, meaning there is no need to have a mandated course of action as good will prevails:

Peralta: The *canalistas* are the cousins of those who have wells near the canals, because everyone knows each other. They realised and agreed to open the sluices this winter so water would flow and infiltrate, then that water was pumped from the well and the APR was able to use water. Such things are about common sense, and problems are solved by talking.

Me: So what you are saying is that with those 3 examples, water is guaranteed for human consumption?

Peralta: Of course, of course, I have no doubt about it.

Me: But what about Petorca, where there is no water for human consumption? Could we say that water was assured for people there?

Peralta: Petorca is a special, specific case.

Me: But there are many of these specific cases. Don’t you think it might be important to create an article within the Code or a law that ensures water for human consumption is secured?

Peralta: But we have article 27.

Me: Yes, but that means there would have to be an expropriation.

Peralta: But let them [the State] expropriate, that is what they have to do, just as they do when they have to make a highway.

Me: What is the problem with adding that article [on human consumption] into the legislation?

Peralta: Nothing, I do not oppose to water being a human right and all that. What I'm saying is that the issue won't get solved by writing that on a law.

Me: But the problem is that if we don't write it on a law, we are at the mercy of people's good will.

Peralta: Well, 90% of the problems in Chile are solved with good will, not because there is a law. Look at the fire department. Who pays them for their work and how many fires do they put off every year? All of them. So of course, there is good will, of course it exists. But OK, let's put the article in the Code. Perfect, no problem. But even if you put it in the Code, it will not be achieved, because that depends on the political will to invest money to solve problems. If the APRs need water, they should ask the MOP and the MOP should expropriate.

The idea of a "few examples" does not work both ways. If I say there are a few examples of APRs with no water rights that is discredited by Peralta as unimportant and as not being the norm. When he says that good will prevails and gives three examples, I am supposed to understand them as "the norm". This is because I am failing again in reading the Water Code as instructed, and I am trying to make it work for other people who do not own water rights, which explains my failure.

A few days later, and while I was still in Santiago, I interviewed an economist with expertise in water markets from the Pontifical Catholic University. He mentioned that due to the lack of surveillance capacity within the DGA, it is common for people to use more water than they are entitled to, and that the sense of community Peralta talks about is lost. His view is that the water management performed by the Canal Associations is not "good" management as there is evidence of water theft and irregularities, but nobody does anything about it. He claims the authorities are not well informed about such issues and there is a general misinformation in relation to the conditions of water resources within catchments. When I brought up the example of Petorca, the economist explained there have been serious allegations of water usurpation in

Petorca and not only theft. People are not only using more water than they are entitled to, but some have built underground pipes to pump water from canals or rivers without authorisation. There is evidence of this, he says, which is what I was told by Mundaca, leader of MODATIMA, when I talked to him about Petorca's conflict with the avocado producers. Despite of there being evidence of water usurpation, nothing has been done.

In my conversation with Peralta we discussed a situation in which Santiago was left without water for a week due to problems in the water plants of the regional sanitary company. Peralta says the way in which they solved this issue was through the help of the *Junta de Vigilancia* of the Maipo River. The water right users got to an agreement where they transferred their water rights between each other so the sanitary company could solve the problem. The agreement involved economic compensation. In his view, it worked so well that it did not make the news:

Peralta: If a person owns water, they can do what they want: lease it, sell it, mortgage it. I can use it from January to March and then another person can use it from March to April and we make a barter, we do business [...] But now, they want to change that [with the modification proposals]. So, if you get a water right for one use, you would not be able to change it for another use. This adds rigidity to the system, solutions will become much more expensive and difficult because if one person has water he is not using and I'm in need, then the State would have to solve it, and we all know what that means. It could take ages.

Several documents reveal important differences between the amount of water rights allocated and the volume of water extracted at the national level, which is explained by 'idle water rights' that are not used. 'Idle water rights' can have negative effects in local development as there are activities that cannot be accomplished because there are no legal water rights available in the basin as the catchment is closed (Escenarios Hídricos 2030, 2018, p. 67).

During my interview with Peralta, I made a comment in relation to the economic resources those trading in the water market need to have in order to make a good move. Our conversation became more tense:

Peralta: But to expropriate when required would be a lot cheaper, as there are no more than 200 places with water issues, no more than that!

Me: Well, but that can get worse in the future, especially if we consider droughts and climate change.

Peralta: But I don't care about the future! Anyway, expropriation would cost much less than water tankers. The State throws money away, it's astonishing and then they say the State doesn't have any money! [...] The State earns a lot of money with irrigation works through land taxation. And after that, when people are producing the land, the State takes the money from the VAT. So, it is a very good business for the State to have people producing the land.

I understand Peralta is instructing me on how to speak in an institutionally recognised way. My concern about the future does not have a place within the Water Code, nor within the work of the CONCA as designated water managers. I am not competent in his language, nor successful in explaining the benefits of the Water Code modifications, including the inclusion of the human right to water¹⁰⁰. This is because in Peralta's view there are established forms to secure water for human consumption within the text, and this is by using the expropriation measure already built in the Water Code (Ministerio de Justicia, 1981, art. 27). According to Peralta's reading of the text, there is no need to change the Water Code as the State could expropriate people to guarantee drinking water availability. However, in his talk and the lobby work he does through meeting politicians, DGA and MOP officials and even *dirigentes* such as Gloria Alvarado from FENAPRU, he embodies the role the Code has ascribed to canal associations, and the power the proposed modifications might take away from them. For instance, Peralta mentioned he tried to talk to the leader of the Federation in several occasions, however he claims Alvarado became reticent and did not want to talk to him anymore.

¹⁰⁰ This is one of the main propositions currently being under evaluation in the Senate. The inclusion of the human right to Water has been advocated from several NGOs such as MODATIMA, Chile Sustentable and green party and left-wing politicians. The previous Director of the DGA advocated for these changes, however, the current Director does not share this view as the aim of the current government of Sebastián Piñera is to provide legal certainty to those who already own water rights.

Peralta: I'm very interested in talking to all the people who use water in Chile because there is a job not done in this country that is the management of water resources at the basin level. We [CONCA] have done some work on this, but nobody knows about it. The APRs are a fairly important user in a basin. They aren't important in terms of numbers but in what they represent socially. I want all the water in one basin to be managed by the *Juntas de Vigilancia*. It has to be someone who has contact with all those who use water, because the relationship between water users is very intimate, so there can't be some users within the *Juntas* and some outside them. That's why I'm talking to the people of the APRs so we can do things together [...] It is necessary to integrate because instead of solving problems through politicians and courts, we could solve them among ourselves.

He borrows from the discourse of IWRM in the belief that the most appropriate scale for the management of water resources is the river basin. Peralta's plan is for all users of underground waters to join the *Juntas de Vigilancia* as people who have wells draw water from the same basin. Underground waters and wells depend on how much water infiltrates through the Canals which is what Felipe mentioned as the way in which APRs 'profit' from the canals. Peralta has a similar view on this, as he mentioned 'underground waters feed on the misuse of surface water'. The ideological circle expressed in the Water Code has the power to turn a natural phenomenon such as infiltration into 'misuse' or a mechanism for APRs to 'profit' from.

In Peralta's and Felipe's talk there are normative ideas about how things should be, and the responsibility canal associations have in managing the country's water. The weighty authority of the Water Code is embodied in these men's talk and work as they are responsible for applying the Water Code instructions. In this speech genre and sphere of activities the mandated course of action to secure drinking water for human consumption is for the State to expropriate people from their water rights. The text is not concerned with how the lack of water for human consumption arises for some people, but with how it is itself interpreted to operate in accordance with its mandates. This interpretive procedure acts as an ideological circle where the solution to the event of lack of water for human consumption is solved by a feature of the same text, namely expropriation. The logic of the Water Code remains unquestioned in its quality for dealing with

those events. Incidents of lack of water are thus re-described in the terms provided by the Code and are seen by Peralta as instances of politicians' failure to fulfil people's needs for drinking water.

Acting as an agent of the text

As I listened to Peralta's instructions, I became an agent of the Water Code and worked within its logic. Although only for a short period of time. I saw the lack of water for human consumption in relation to the procedures the Water Code provided in article 27. The official account of the Code provided a "shell", an interpretive frame to be filled from the original account of Juan. My intervention in the text-reader conversation reconstructed my initial idea that by hoarding shares of water, water right owners represented by the *Canalistas*, prevented people from accessing water. I read it now as an instance of the mandated course of institutional activity (work-text-work) where the government had failed to secure water for citizens by not performing expropriation. Being governed in such a way by the text I set off looking for "evidence" of expropriations, which I could not find. I wanted to understand how this had happened and why politicians allowed this to occur. I found out expropriation turned out to be a rather impracticable thing to do as explained by several people I talked with:

'A place where it is very difficult for this to happen is Copiapó, where 1 lt/sec of water costed 70 thousand dollars last time I checked. That is the price of water in Copiapó' (Interview with Water Economist).

Similarly, the APR Programme Director in Santiago said article 27 of the Water Code had never been used. He talked about the political price of expropriating water, which is something in his view no politician is willing to face as this would imply negative economic consequences. This view is also shared by an officer from MIDESO. Another reason I heard for not expropriating water rights is the difficulty to assess the value of inheritable property. Handing water rights to people in perpetuity makes monetary valuation difficult especially as water becomes scarcer and

conditions get drier (Interview with Water Economist). Mundaca, the leader of MODATIMA believes politicians would not want to expropriate themselves, implying there are too many vested interests. In any case, these explanations for not expropriating are working within the ideological circle of the Water Code by which expropriation is the method to deal with the lack of water for human consumption. By using this formula, the social organisation of how differential access to water occurs in the first place, remains unquestioned. Conforming to the expropriation measures suggested by Peralta expresses a commitment to the ideological practices of ruling. Even when some readers resist the Water Code's organisation they are still organised by the text, which reminds me of this sentence: 'Sure, they may use other speech genres, some of which resist the institutional, but even resistance adopts the standardizing agenda, if only as a foil' (Smith, 2005d, p. 108).

Another person I interviewed was Aranda, a lawyer from Universidad de Chile. He worked for the DOH helping the *dirigentes* from the Federation and employees from the APR programme in crafting the Law on RSS. He differs from Peralta's views on expropriation as this is an impractical measure when talking about an inheritable property as water, whereas land although also inheritable, can be assigned a concrete value according to the utilities its use can generate. In Aranda's view this is part of a working style within the State where politicians usually make wonderful statements of intentions, but do not provide for the practical means to deliver action. He mentioned this in relation to a reform proposal which is currently being assessed in the constitutional tribunal and which would give the DGA various penalising powers to apply important fines and improve its overseeing faculty over the use of water rights. However, there are no resources envisioned on this instrument for the DGA to apply these improvements resulting in a set of good intentions that end up in nothing. Similarly, article 27 of the Water Code seems to fall into the same constraints as there are no mechanisms in place to expropriate water rights.

The exploration of water rights and the way in which they are socially organised through the Water Code explains how in Petorca where rivers have dried up, the production of avocados has

increased from 2,000 to 15,000 hectares. This shows that a market economy without specific regulations will not allow for the protection of any water use that is not productive. This reveals that solutions to the issue of drinking water access encountered by Juan and the Committee needs a different approach and a different mandated course of action. An alternative language and structure with a textual base committed to an alternative interpretation of water could, in instances of water scarcity, point to a method for a coherent course of action.

As explained in this Chapter, the only way in which the human right to water could be made actionable in Chile is through expropriation, which is practically unfeasible. Fundamental changes will require however, a strong political commitment. As Mundaca suggested: 'people who have benefited for 37 years from water rights they obtained for free, should not be compensated with money' which is what the Water Code currently mandates. This suggests that perhaps a solution to ensure drinking water access to all citizens, will require an entirely different regulation, independent from the Water Code.

This Chapter has expanded my knowledge of the first disjuncture experienced by Juan, and has demonstrated how water rights are socially constructed and regulated by a boss text with power to produce differential access to water, which is actionable by specific groups of people where Juan does not have a say. The following chapter will examine the work taking place at the APR and which stemmed from the standpoint informant's request for water. Moreover, the research problematic will be weaved together as the second disjuncture and other issues in the local setting became apparent during the PAC event.

Chapter 6: Work practices and processes in the local setting

I have explained in Chapter 5, how the social organisation of water in the Elqui river basin and in the country more generally, produce differential access to water and how those ruling relations organise the work of people from Arrayán and work activities taking place at the Committee. Chapter 5 focused on a close reading of the Water Code, however this is not the only text organising the experiences of standpoint informants. In this Chapter, I explore the work practices going on at the APR level and the work processes organised by texts used in the Committee by members of staff to provide water to standpoint informants.

The Committee is the first level of the organisation of rural drinking water management Juan, Fito and José encountered when requesting access to the APR water system. Once the working practices of the Committee are described, the extra-local organisation of rural drinking water will be made visible by tracing the text-mediated sequences of actions producing the I&E project.

I begin this Chapter with an ethnographic snippet of a citizen participation (PAC)¹⁰¹ event I attended, and which revealed a range of issues people working at the APR as well as its members, were dealing with. Data gathered from this event complemented and expanded my knowledge of the material realities of standpoint informants described in Chapter 4. It gave me an insight into the ways the APR programme is organised and revealed a myriad of analytic threads I could have opened for ethnographic exploration. Although I chose to follow the I&E project because it was the project going on at the moment of my fieldwork and because of the work and time it was demanding from people situated at the local setting, I want to acknowledge the other issues coming up during the PAC event. In the second part of this Chapter, I focus on the institutional texts used in the APR and that shaped the experiences of Juan, Fito and José. These texts are the feasibility form and the preliminary study. The second disjuncture is revealed in the experiences of standpoint informants and embodied in a request for them to pay for the preliminary study and for a part of the project. The stories I heard during this event, together with the first and

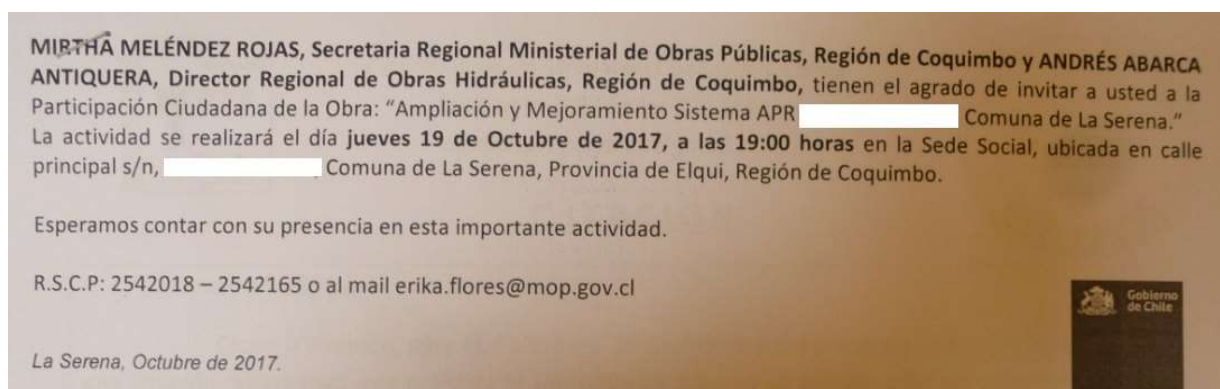
¹⁰¹ PAC is the acronym used in Chile for events for citizens' participation.

second disjunctures stemming from standpoint informants' experiences constitute the research problematic. This problematic is about access to basic services in rural areas such as affordable and quality water and sanitation.

The PAC event

The MOP in 2015 created a unit on public participation, as a result of the indications on a presidential instructive promoting citizen participation (MOP, 2015). These PAC events are seen as a way to “widen public participation and move away from consultative types to deliberative processes in order to allow for an active involvement of citizens in all matters of public affairs” (Bachelet, 2014, p. 7). The I&E project is part of the APR programme within the MOP and was required to conduct 3 PAC events as per the requirements of the presidential instructive. The one I attended was the last one and took place at Viejo's sports hall and was organised by the regional MOP of Coquimbo, as shown in the invitation received by the Committee and forwarded to the members and those who had commissioned the I&E project: the standpoint informants. Pamela, who is the Leader of the APR Unit in this region represented the MOP at this event as the Programme Director was not able to attend.

Figure 8: Invitation to attend PAC event



Ana, the APR manager, introduced the event and welcomed the audience. She explained the aim of this PAC was to inform people of the work done by Oper Plant which included a chemical

cleaning of the pipes. Ana was joined by Elías, the technical inspector (ITO) from Aguas del Valle, the TU supervising the implementation of the project. Ana explained:

We had many issues related to water obstruction and unfortunately people do not understand that in order to make improvements and modifications we need, in many cases, to make sacrifices. Therefore, I am grateful for your attendance today as this shows your interest.

The set-up of this meeting was conventional with rows of chairs facing a white wall on which a presentation was projected. There were approximately 150 people in the room. On the first row sat the beneficiaries of the I&E project, the people from Arrayán. Most of the audience was made up of Committee members who already had access to water and who had seen their water supply interrupted in various occasions as a result of the I&E project and the chemical cleaning of the pipes. There was a rectangular table to the right, in front of the audience where two people were sitting. Ana introduced them as “the authorities” and apologised on behalf of a regional Senator who did not come to the event, and on behalf of the DOH Director and Secretary. Finally, Ana introduced a couple of people from the local political scene such as Jocelyn Lizana and her husband, who were running for re-election as councillors. Lizana is a member of the Committee and lives in Viejo.

Ana encouraged people to raise their concerns and questions as this was the final PAC associated with the I&E project. She explained the first PAC took place in December 2016 when the project was introduced to the community. A second PAC was held in May and it was done to gather suggestions and concerns from the community and show the project developments.

The I&E project

The ITO from AdV began his “PowerPoint” presentation introducing the project, which is part of the national APR programme from the DOH. The presentation was heavily driven by figures and technicalities such as the project’s cost, methods for calculating the capacity for water accumulation, pipes diameter, material, length and the number of members that would gain

access to drinking water through this project. The ITO's presentation was interrupted by a member asking about the dependency of the water system on electricity and the fact that when there is a power cut the water supply is also interrupted. Pamela, the DOH representative intervened to say:

This is a national problem as most APRs have power cuts, especially when there are extreme weather events. We have voiced this concern directly to the authority because the way in which our projects are framed does not allow us to incorporate generators, but [...] we have made the GORE, SUBDERE and ONEMI aware of the need we have to acquire these equipment [...] which shows our institutional support.

Pamela's speech gestured to different components of a broader organisation which is not immediately visible from within the Committee. The *Gobierno Regional*¹⁰² (GORE), the *Sub-dirección de Desarrollo Regional*¹⁰³ (SUBDERE) and the *ONEMI* are all government institutions which, although not directly related to the work of the APRs are connected to it in significant ways, as I will explore in the second section of this chapter when following the texts involved in the I&E project. Pamela also mentions an authority to whom she needs to respond to, and that the need for generators is not part of their 'area of expertise' and not their responsibility. The reason why this issue falls outside the responsibilities of the DOH, is because of the 'way in which our projects are framed'. This is key, and it reveals there is a hierarchical organisation to which the DOH responds to. After a few interventions, the ITO from AdV continues talking about the I&E project:

the total amount of people benefiting from this project are 74 of which 34 did not comply with the "vulnerability score" (emphasis mine) and that is why they needed to contribute towards its implementation. The Committee gathered these contributions and transferred them to the Finance Department within the MOP.

¹⁰² Regional Government.

¹⁰³ Sub-Directorate of Regional Development.

The phrase ‘they needed to contribute’ obscures the effort made by the people from Arrayán before the project got public funds. These are the activities I described in Chapter 4: Juan getting water from the Canal and purifying it. José using the well in his land until it dried up. The use they made of Nicanor’s well and how they were running a ‘mini-APR’. Their request for water to AdV, and finally their request to join the Committee. This last activity meant they had to pay for the I&E project and part of the investment so they could become members of the APR and get access to drinking water. Another clue into the social organisation of rural drinking water mentioned by the ITO during the PAC event is the “vulnerability score”. I wondered how this decision was made and how much people located in the standpoint needed to contribute with¹⁰⁴.

‘Como el gato mirando la carnicería’¹⁰⁵

The second issue raised during the meeting was the absence of a sewerage and treatment system in this sector. A member of the Committee who was in the audience intervened to say:

We are surrounded by new flats and houses that have sewerage while we don’t. I came to a meeting here two years ago and a man from AdV said the funds to implement the sewerage system were available and that they only needed to run a tender process and choose a developer to implement it. But none of this has happened.

Ana replied to this concern:

For your information, many years ago we invested some money and funded a preliminary study for a sewerage project. We presented it to the authorities who are in charge of sewerage systems, but this is still under assessment.

Pamela intervened once again to explain the situation and introduce the new Law on RSS for the first time:

¹⁰⁴ This will be explored in more detail in Chapter 8 when I delve into the details of the *Registro Social de Hogares* (RSH).

¹⁰⁵ Like the cat looking at the butchers’.

The place where this APR is located is a hybrid area between rurality and an urban area, which is the reason why there are places where sanitary services are managed by AdV while others are under the supply area of the APR [...] The two standards of living are different, and the rural area ends up in front of the urban developments with all these urbanisation privileges, like the cat watching over the butcher's looking at the standard of living of those in front of them. This is a national issue and for us as DOH this is very difficult because people come to us with their demands for sewerage. However, as you may know by now, or have been a part of, or at least the *dirigentes* know, there is a new Law on Sanitary Services [Law on RSS] which was published in February 2017. When this law enters into force it should give us, the DOH and MOP, the responsibility over sanitary services in rural areas, which now we don't have. The work done so far in this regard has been channelled through Municipalities and GOREs which have been trying to solve these needs.

Once again, and similarly to the reply given to the generators question the work of the DOH in relation to sanitation in rural areas appears to be constrained and dependant on the new legislation. Rural Sanitary Services (RSS), which is the name APRs will adopt with the entering into force of the new legislation¹⁰⁶, will be in charge of both drinking water delivery and wastewater treatment or sanitation as referred to in the Law on RSS. Law on RSS defines sanitary services as: 'a service for the provision of drinking water and/or sanitation without profit-making, and in accordance with the stipulations of this law, with the adequate investment and training support from the State' (MOP, 2017, art. 2, n). Pamela explained that the different standards between rural and urban areas are because:

People buying new houses have paid for the cost of urban services when paying for the flat. So, the user pays the cost of urbanisation to the construction company, and that area is then incorporated into the operational area of the sanitary company. In rural areas we don't have sanitary companies and that is why we're left with "moles" of urban sectors within rural areas.

¹⁰⁶ There is no clear date for this yet. The legislation was passed in February 2017, but legislations must have a regulatory framework in order to enter into force. The regulatory framework of this legislation should have been ready in November 2017, however it has not been approved to this date (October 2019).

What Pamela means by “moles” are rural areas and as such, are outside the concession area of sanitary companies. However, when developing companies build blocks of flats they work together with the region’s sanitary company (in this case AdV) so that these new flats get drinking water and sanitation. The “moles” are these developed areas that present urban standards, but which are still located within rural areas.

Pamela mentions the Law on RSS assuming people have participated on its development or assuming they know about it: ‘as you may know by now, or have been a part of, or at least the *dirigentes* know...’. This shows a difference between what the authorities think people know and what people actually know about the Law on RSS. This became clearer after the PAC event, in a conversation I had with Mariana, the president of Algarrobo-Viejo:

Mariana: we have only been to talks where they give us information [about Law on RSS], but we never went to Santiago, to the public participation stages. I bet you, they will now come here and do a workshop on it, when the law is ready, when it only needs the final details (Interview with Mariana, APR President).

The issue of sanitation and sewage came up during the PAC event which are tasks currently beyond the water delivery responsibilities of the DOH. Under the current scheme, if APRs want to access sewerage, they need to apply to funding schemes which are channelled through other government bodies such as the Municipality and the SUBDERE. Lizana, who was running for the following month’s municipal council elections, intervened to explain the community had voiced their need for sewerage 30 years ago. She said, in order to make it a project worthy of public funding from the national government more areas need to be included so to prove more people will benefit from it. The explanation she gave during the event is that ‘in this country we are full of needs and we have limited resources, so it is more likely for a larger project to get approval and hence resources.’ This shows rural areas are left behind or at least this is the sentiment prevailing. The candidate gave an explanation that took almost 10 minutes and which she recorded to then send to her electorate. People listened to this explanation patiently.

It is interesting to note that regarding rural development, one of the main goals of the State has been to decentralise the country as mentioned by several of the people I interviewed especially those working for the government. This discourse can be traced to State documents in which these objectives are clearly stipulated. For example, President Bachelet in 2014 created a Presidential Advisory Commission on Decentralisation and Regional Development as ‘the development and future of our country requires a significant and sustained effort towards decentralisation of all territories, locally and regionally’ (CAPDDR, 2014, p. 10). These ideas were echoed in conversations I had with the regional DOH Director and employees from MINSAL. For example, an officer from MINSAL in Santiago explained APRs are not a priority in Chile:

We need to know what this country wants, do we want cities to continue growing or do we want to have human groups living in rural areas, but at the same time we leave them with no water. 95% of the total MINSAL budget is for building hospitals, hire doctors, etc and only 5% is for public health. If you want me to tell you the amount of the entire budget for water monitoring, it is a statistical error. There is only one representative of the MINSAL per region, and that person has to go to all the APRs, take water samples, inspect, write reports, liaise with the DOH, respond to the requirements of the authority, respond to people's inquiries, solve emergencies, measure flows, review projects, etc. [...] This shows how much of a priority APRs are to the State [...] The State has to ensure the minimum conditions for people to subsist and drinking water is basic to people's survival and development. If the State is not able to provide water to its people, then I don't understand what its function is (Interview with Environmental Health Officer, MINSAL).

This excerpt relates not only to water availability but also to the issue of water quality which is the third topic raised in the PAC event, as I will now explain.

‘Esta es el agua más cara y la de más mala calidad’ ¹⁰⁷

Although the APR’s main aim is to provide drinking water to its members, people were increasingly buying jerrycans from supermarkets instead of drinking water from the tap as they do not trust the quality of the water they get from the Committee. This was an important point raised in the PAC event as people complained about water looking dirty and being more expensive than the price of water people pay in urban areas. The ITO mentioned the accumulation of limescale and increases in temperature due to climate change, as the reason behind the chemical cleaning of the main pipe. Ana explained that the results from water monitoring are always within the Chilean Norm 409 on Drinking Water Quality and Sampling (INN, 1984). Pamela intervened again to explain that the water from APR systems are under continuous monitoring by regional officers from MINSAL, completely independent from the MOP. However, as explained by the MINSAL officer above these employees have several other duties to attend to besides checking the quality of water in all APRs in the region, which in Coquimbo accounts for 189 (Interview with Officer Department for Sanitary Action, MINSAL, Coquimbo).

During the event, Pamela intervened to explain the responsibility of the DOH is to deliver water with continuity and quality to people’s houses and that they will monitor the water to see whether there are consequences for public health. These are referred to as the “3 Cs” standing for *‘cantidad, calidad y continuidad’* (quantity, quality and continuity) which are stipulated in the regulations for drinking water services (MINSAL, 1969, p. art. 1). Pamela mentioned that the water AdV sells to the APR is “raw water” which means ‘the only thing you need to do to the water here in the APR is the chlorination’. At the end of this event José and Juan were disappointed as they were expecting the presentation to be more informative about the I&E project:

¹⁰⁷ This is the most expensive water and the worst quality one.

Juan: Instead of talking about the project they started talking about other things. One lady was saying the water was too expensive and then another woman grabbed the microphone because she was running for elections, a real mess. I was a bit disappointed because I thought we were going to talk about the project. The things they talked about were the exact same things they explained in the other PAC events (Interview with Juan, Standpoint informant).

This ethnographic snippet shows that public participation is understood as an opportunity for people to passively sit in a sports hall and be informed by technicians and engineers about the I&E project. However, and as this PAC was the last chance people had to voice their concerns about other issues, they did so, even when not directly related to the I&E project.

Discoveries from the PAC event

As described earlier, people from Arrayán are the standpoint informants whose concerns my inquiry adopts. As they themselves explained their most pressing need at the time of the fieldwork was to gain access to drinking water from the APR. This is the analytical thread I follow in Chapter 7. Despite my choice, I would like to acknowledge two other important issues that were of concern to Committee's members and staff. These issues are relevant to understand the frustrations people at the Committee level deal with and provide insights into the broader organisation of water management, although not directly related to the I&E project or to the concerns of standpoint informants. These concerns reveal the attention the APR programme and rural areas get (or not) from the State and are important for the development of the research problematic. As Smith mentioned, 'we begin from where people are in the world, explaining the social relations of the society of which we are part, explaining an organization that is not fully present in any one individual's everyday experience' (Smith, 1987, p. 89). To explore that organisation, the experiences of standpoint informants are complemented with issues going on at the local level as well as in extra-local settings.

The PAC event thus, provided a window into the overarching problematic of explicating the ruling relations of something. That something is 'a coherent arc of the larger analysis' (Rankin, 2017b,

p. 7) and it is revealed in those instances when knowledge based on daily experiences is at odds or subordinated by abstract knowledge expected to be used by informants to make decisions. The issues revealed in the PAC event and which concern APR members and staff relate to what they perceive as low water quality and high tariffs, and the lack of sewage systems in rural areas. The fixed cost for tap water in this Committee is more expensive than that charged by AdV in urban areas¹⁰⁸. As expressed by some of the members, expensive services should be expected to be safer or trustworthy. Such an idea is revealing about the relation people expect between price and quality in which cheap services should be of dubious quality. However, this is not what is happening in the experiences of Committee members.

After the event, I talked to Ana about the results from water analyses and she shared what she thought of the water quality issue. She thinks it is strange for the results to comply with the parameters described on Norm 409 (INN, 1984) as the APR pipes were full of limescale which caused the blocking of the pipes. She showed me a piece of this rock-like material (figure 9) which Mariana and herself used as evidence before the DOH when requesting for a chemical cleaning of the pipes, which was done by OP.

¹⁰⁸ The fixed cost of drinking water is \$3,800 per month (US\$ 5,5) in the Committee Algarrobo-Viejo, whereas in urban areas the fixed cost charged by AdV is \$800 per month (US\$ 1,1).

Figure 9: Pipe obstruction



Source: DOH document on the Committee's pin board, announcing the chemical cleaning.

I also asked Ana about the cost of water bills, an issue mentioned at the PAC event. She says tariffs are expensive because the Committee buys water from AdV whether other Committees have their own wells which make their tariffs cheaper as they get the water for free. Ana mentioned the APR has been trying to buy shares of water from Canal Algarrobo as an alternative source of water. However, they would need at least 10 shares to satisfy the demand. The problem is that nobody is selling water rights and she thinks people wait for their prices to increase to make a profit from them. Moreover, information is not available as there is no public information system to find out how much water rights cost and who is selling them. Ana, reflecting on the APR's water rights situation mentioned:

Committees like ours are vulnerable in this matter. If we don't have a well and none of our members has one, then we are at the mercy of water owners and their willingness to sell their shares. But we are still vulnerable, despite of the fact we are buying water from AdV, because if there is an emergency, they can cut us off to supply water to the city. We are not a priority (Interview with Ana, APR Manager).

She showed me the “52b contract” the Committee signed with AdV in which the company sells them 18m³/sec of water. She explained while pointing at article 2, that urban areas are considered as “priority” customers for the sanitary company, meaning AdV will prioritise the delivery of water to their customers in the city in case of an emergency (Appendix One). Article 3 of the contract mentions this again, saying that in case of insufficient water, the supply to the APR will be suspended without compensation.

Another issue mentioned at the PAC event was the lack of a sewerage, which again differs from the conditions of new flats located in rural area, which get services from AdV including water and sanitation. This explains the existence of “moles” of urbanised development within rural areas showing differing standards of living between rural and urban infrastructure.

The main reason for the PAC event was the I&E project, which was producing, at the time of my fieldwork, additional work from and concerns for the APR staff and members. However, I was able to see other small problematics that were related to the business of water and the consequences of its organisation for standpoint informants and Committee members.

The next section is a reconstruction of the work practices undertaken by people working at the Committee as a result from the I&E project. I explore the reasons behind the payment of the preliminary study by standpoint informants which is the second disjuncture I encountered. As I will explain in Chapter 8, this second disjuncture relates to how the category of “vulnerability” is constructed.

Filling out the feasibility form


When people from Arrayán walked into the APR requesting access to water they were asked by Susana (one of the secretaries of the APR) to complete a “feasibility form”. This is where the “I&E project pipeline”, as I call the textually mediated sequence of actions, began. The APR worker knows by virtue of her professional competence how to fill in the form and where to send it for assessment. She even knows in advance what the result of this assessment will be. This is a

routine practice as I realised there was a pile of forms which had been rejected by the DOH and sent back to the Committee.

As shown in figure 10, this is an institutional form called “Request for drinking water feasibility” and it is an official document as shown by the government logo on the left-hand corner. It contains the name of the Committee, the name of the person requesting drinking water, their RUT (which is a personal identification number associated to each citizen) and their phone number. The applicant needs to indicate whether they are the owner of the property to be connected to the water system, a tenant, or another option. In terms of the property the address is required as well as the use of the property (whether residential, commercial or industrial). On the lower half of the sheet it says “*Uso exclusivo del comite*” which means “For exclusive use of the Committee”. The information here is key for the DOH assessment of the situation. This section includes technical information about how close the property is from the main water pipe, a drawing of the location of the property in relation to the mains, information about the diameter of the pipe, its materials, pressure at connection point, and any relevant observations in regards to the mains close to the property.

There is no space on this form to account for the lived actualities experienced by Juan, José and Fito and the effort, work, resources, and time invested before requesting access to the APR (activities described in Chapter 4). None of those efforts count as institutional information when requesting access to drinking water.

Figure 10: Request for drinking water feasibility

 **SOLICITUD DE FACTIBILIDAD DE AGUA POTABLE**
DE OTORGAMIENTO DE SERVICIOS DE AGUA POTABLE RURAL

Código:

COMITÉ DE APR DE FECHA

NOMBRE PROPIETARIO

R.U.T. TELEFONO

RELACION CON LA PROPIEDAD A DOTAR DE SERVICIOS: (marcar con X)
 DUEÑO ☐ ARRENDATARIO ☐ OTRO (indicar)

DATOS PROPIEDAD A DOTAR DE SERVICIOS:

DIRECCION

SECTOR LOCALIDAD COMUNA

USO O DESTINO:

HABITACIONAL ☐ COMERCIAL ☐ INDUSTRIAL ☐ OTRA

MOTIVO:

☐ DOTAR DE AGUA A VIVIENDA EXISTENTE
☐ SUBSIDIO
☐ URBANIZACIÓN O LOTEOS

Nº VIVIENDAS DIÁMETRO SOLICITADO

Uso exclusivo del comité

MATRIZ PRÓXIMA O QUE ENFRENTA LA PROPIEDAD

DIÁMETRO (mm) MATERIAL

PRESIÓN PUNTO CONEXIÓN POSIBLE (bar)

DISTANCIA DE LA PROPIEDAD A LA RED (m)

INDICAR CUALQUIER OBSERVACIÓN RELEVANTE :

NOTA : El croquis deberá indicar la red de agua potable más cercana y la distancia al sitio a factibilizar.

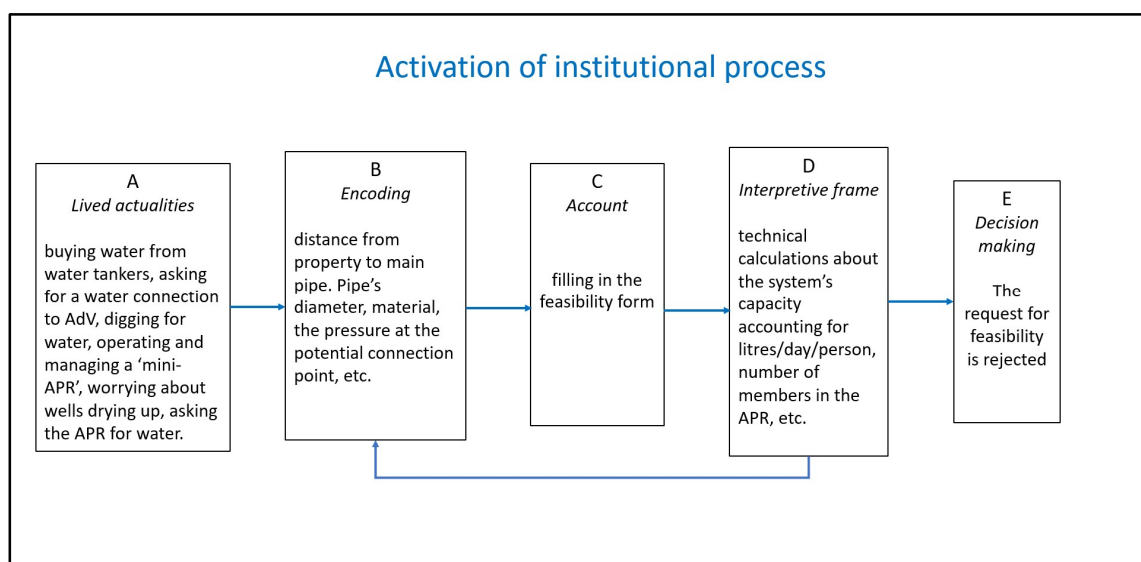
CROQUIS DE UBICACION
Indicar Norte Magnético

DECLARACION:
 Declaro que los datos proporcionados son verídicos y eximo de responsabilidad al Comité de Agua Potable Rural por cualquier inconsistencia que los mismos presenten.

FIRMA SOLICITANTE
 NOMBRE: _____
 TELEFONO: _____

I have analysed this work-text process in figure 11 below where Susana completed the form and sent it to the DOH. The work done at Algarrobo-Viejo activates the institutional text, which will then arrive into another setting (regional DOH) where it will activate other work processes which I explain in Chapter 7. As figure 11 shows, people requesting access to water speak from the experiences of their own “lived actualities” which are the experiences of Juan, José and Fito (Box A) described in Chapter 4. The last action they take is to request drinking water from the nearest Committee: Algarrobo-Viejo. Susana, as front-line worker of the APR does the work of encoding (B) people experiences into an objective account materialised in the “feasibility form” (C). An institutional process is set in motion whereby an institutional schema (D) is imposed into the particulars of people’s experiences and context. The particulars of that lived experience (A) are selected to fit a schema (D) and will be interpretable by it (Smith, 1990b, p. 139). The interpretive frame or schema is built organisationally and professionally and provides instructions I later recognised in other institutional texts mediating the I&E project pipeline, and which I will explain in the following Chapter. The interpretative frame governs the encoding process illustrated by the arrow from boxes D to B, which in this example is an institutional text expressing what a rural drinking water system “should” look like.

Figure 11: Ideological circle activated at the Committee




Source: Author based on Campbell (2001) and Smith, G.W (1988).

Through this process, an objective textual account is created -the feasibility form- that intends an interpretive frame (D) for decision making and action (E). The categories are filled in with Susana's knowledge on how to work up people's experiences into the text representations with an already constructed interpretative frame. An account will be effectively completed when it allows decision-makers to recognise whether the selected attributes of Juan, José and Fito's experiences meet the criteria set out in the interpretive frame. Campbell (2001, p. 245) explains accounts are 'constructed of exactly the information that will enable an organizationally acceptable decision' to be made. Similarly, an institutional process is activated by transforming lived actualities into the technical "facts" of a DOH report through an encoding process activated by the working practices of front-line workers. Once the feasibility form is completed, Susana sends it to the regional DOH, the department within the regional MOP where a decision is made (E).

The DOH sends the assessment result back to the Committee (Figure 12). This sheet includes the following observation: 'Possibility of connection rejected due to lack of capacity in the system. In order to provide for more water connections, it is necessary to implement an improvement and extension [I&E] of the APR system, and for there to be water resources available'.

Figure 12: Rejected feasibility form

 **CERTIFICADO DE FACTIBILIDAD DOMICILIARIA**
N° E° [REDACTED]

FECHA: 13.04.2016

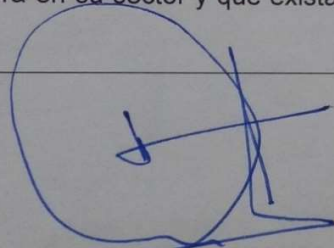
NOMBRE DEL SOLICITANTE		[REDACTED]	
DIRECCION		SITIO # [REDACTED] LOTE # [REDACTED]	
SECTOR BENEFICIADO		[REDACTED]	
PROVINCIA: ELQUI	COMUNA: LA SERENA	LOCALIDAD: [REDACTED]	
N° ARRANQUES: 1	ACEPTADA:	RECHAZADA: X	
	SIN CONDICIONES	DENEGADA:	
	CON CONDICIONES		


OBSERVACIONES

Factibilidad rechazada por incapacidad del sistema. Se requiere para factibilizar mas arranques, la ejecución de un Mejoramiento y Ampliación del Sistema de agua potable con cobertura en su sector y que exista disponibilidad de recurso hídrico.

FECHA VENCIMIENTO:


20-10-2016


TOMAS CORTES ZARATE
SUBDIRECCIÓN DE PROGRAMAS SANITARIOS
DIRECCIÓN DE OBRAS HIDRÁULICAS
REGION DE COQUIMBO



Proyecto

MDA/
-archivo
Cirujano Videla N° 200, 2° Piso, La Serena
Telefono (56-51) 542018- 542141
e-mail : andres.abarca@mop.gov.cl
www.mop.gov.cl



As explained by Susana and Tamara at the Committee, the rejection of the request for drinking water feasibility triggered the commissioning of an engineering study that provided the basis for the I&E project.

Commissioning the engineering study

The next step in this process is the commissioning of what is known as the “preliminary study” which will serve as the technical basis for the “I&E project”. The decision of who should commission the preliminary study involves another decision-making process that is not present in the feasibility form. This process is done through the *Registro Social de Hogares*¹⁰⁹ (RSH), the current instrument measuring poverty in the country. This instrument categorises households as either “vulnerable” or “non vulnerable” according to the percentage they obtain through a process I will explain in Chapter 8. If the people interested in getting access to water are considered “non vulnerable”, they are asked to commission the preliminary study as was the case for the community of Arrayán.

Moreover, the RSH as an interpretive schema, is instrumental for the implementation of the I&E project, which would not have been possible without funds from the central government. The reason why the project got public funds was because there were other households requesting water access from the Committee, who were indeed considered as vulnerable under the RSH. I found out through conversations with Committee staff that the government body assessing projects’ eligibility for funds and administering the RSH is the *Ministerio de Desarrollo Social*¹¹⁰ (MIDESO). MIDESO’s employees also assess whether a project contains all the technical and economic information required by the *Normas de Inversión Pública*¹¹¹ (NIP), which are divided according to sectors and described in the *Requisitos de Inversión Sectorial*¹¹² (RIS). Rural drinking

¹⁰⁹ Social Homes Record.

¹¹⁰ Ministry of Social Development.

¹¹¹ Norms for Public Investment.

¹¹² Investment Requirements by Sector.

water projects, which are those I am interested in, fall under the 'Water Resources' investment sector. The MIDESO clearly states that:

Historically, the National Rural Drinking Water Programme has aimed at providing drinking water to low-income populations, which explains the existence of investment subsidies [...] However, there are different income levels within a locality and some of the *arranques* may correspond to second homes, leisure patches, gated communities or tourist centres. It is assumed, the new Law on RSS will contemplate differential water tariffs to address this aspect. Otherwise, it will be the responsibility of the financial body to determine and agree, together with higher income beneficiaries, their contribution to the project.' (MIDESO, 2017, p. 1).

The idea that mainly poor people live in rural areas is also reflected in this quote: 'rural populations have limited economic resources and the family is usually both the unit of production and consumption' (MIDESO, 2015b, p. 5). As Campbell (2001) points out, the decision making process to designate funds 'objectively' discriminates among applicants so to select only those citizens who have the greatest needs. Those needs are defined and worked up in textual practices that are not of their making. As a result, some people are excluded and do not receive the help they want or consider they need. In this excerpt Fito does not see himself as poor, although not as wealthy either:

Fito: We had to contribute with funds because the philosophy behind the APRs is that they fulfil a social role to allow vulnerable, poor and low-income families to access drinking water, but luckily we are not amongst the poorest group. We are not rich either, but we had the capacity to contribute. This is stipulated in the CAS form which is now called the home protection record or something like that, I think it changed names. But they considered us all the same, despite of the fact that some of us had money issues while others had more than enough! From a certain score upwards, they consider you as non-vulnerable and from that score down you are considered vulnerable' (Interview with Fito, Standpoint informant).

It is interesting to see how the discourse of what vulnerable and non-vulnerable entails is taken up and used by people targeted by it such as Fito, even when he might not agree with the classification results. Consequently, besides paying for the engineering study which costed \$14 million Chilean pesos (US\$ 20,750 approx.) the people from Arrayán had to contribute with CLP\$ 28 million (US\$ 40,800) towards the project. Moreover, once the project was approved, community members had to pay a \$750,000 (US\$ 1,050) membership fee each to become a member of the APR, on top of the cost of the water meter installed in their houses. In total, the organisation of Arrayán paid 63 million Chilean pesos (US\$ 92,550). As explained by Fito and José during a conversation we had, the money paid by this organisation benefited 40 additional and 'vulnerable' families without whom this project would have not got approval from MIDESO for public funding.

As I found out when talking to the APR Director in Coquimbo, people in urban areas are not required to pay for a proportion of the investment as the infrastructure has already been entirely paid by the State. This points out to an inequality in the way rural and urban inhabitants are treated, and it is contradictory to the presidential will to decentralised the capital and encourage people to move into less populated regions (CAPDDR, 2014). Moreover, this opposes the objectives of the APR programme which is 'for people to stay in their villages and not to migrate to the cities'. What this denotes, is a lack of commitment to the objectives of the APR programme and to improving the quality of life of rural populations. In addition, the fact the State does not implement the same method in urban areas results in a subsidy to the sanitary companies which do not need to invest in the creation of the infrastructure to do their job of providing water and sanitation to urban areas. If this is not required from sanitary companies, why is it required from rural inhabitants?

When talking to standpoint informants about their commissioning of the preliminary study and their contribution to the project, a second disjuncture arose. This is revealed in this interview excerpt:

Juan: Here you cannot question anything. First of all, the water is managed by AdV. They should have coverage for all of us, or the State should ask them to extend their pipes to reach everyone's house. *We had to pay for this investment, and this is what I don't understand. Why?* (emphasis mine). I mean, I understand the position of AdV and of all the companies working on public services, they will not install water to Juan because to extend those pipes up to here will cost them like 20 million and Juan will only pay \$12,000 pesos so not even in 20 years they'd get their money back. But, is this what I have to hear as a citizen of this country? (Interview with Juan, Standpoint informant).

This disjuncture is about the frustration of having to pay for the preliminary study and for part of the investment instead of this being the responsibility of either the sanitary company or the State. The phrases highlighted have guided my analysis especially in relation to what texts to follow when stepping into the extra-local setting to understand how access to drinking water is organised in a way that produces these frustrations for Juan. Discovering these knowledge disjunctures, which I observed empirically focused my attention on other people's knowledge and doings, people who do not occupy the standpoint position. The first disjuncture explored in Chapter 5 and this second disjuncture, which I explore in detail in Chapter 8, are foundational to the formulation of the overarching problematic.

At this point, the problematic is becoming clearer and it has to do with those categories such as water rights and vulnerability which although created outside the local setting have important and sometimes destructive impacts on people's lives and environments. The way in which people working with these categories relate to one another is textually mediated through reports, forms, and surveys. The effects of these work processes are felt by standpoint informants and they usually require from them an important amount of effort, time, and especially money. The same is not required from urban inhabitants or sanitary companies. I realise this relates to the neoliberal economy existent in the country and which poses important burdens on people to fulfil what they consider a basic need: in this case, the human right to water. As Juan describes in the excerpt above, it seemed like the people from Arrayán are inevitably pulled into the drinking water management system which intersects with a socio-economic assessment of

households and the conceptualisation of poverty. The problematic I am here putting together comes from the institutional knowledge of drinking water as an economic good, seen as a luxury in rural areas and not a right. These ruling processes are experienced by standpoint informants as powerful extra-local forces that subordinated their experiences, efforts, and knowledge. Their actualities and local particularities are hooked up with institutional actions which are mediated by abstract ideas of what water should be treated like, what an APR should look like, and the characteristics of the people who should live and work in rural areas. However, these forces do not only shape the work of standpoint informants but also the work going on in the Committee as the second part of this Chapter shows. For people in the local setting, these institutional processes are something they need to do and know how to do in order to get on with their work and provide water to standpoint informants (Rankin, 2017b).

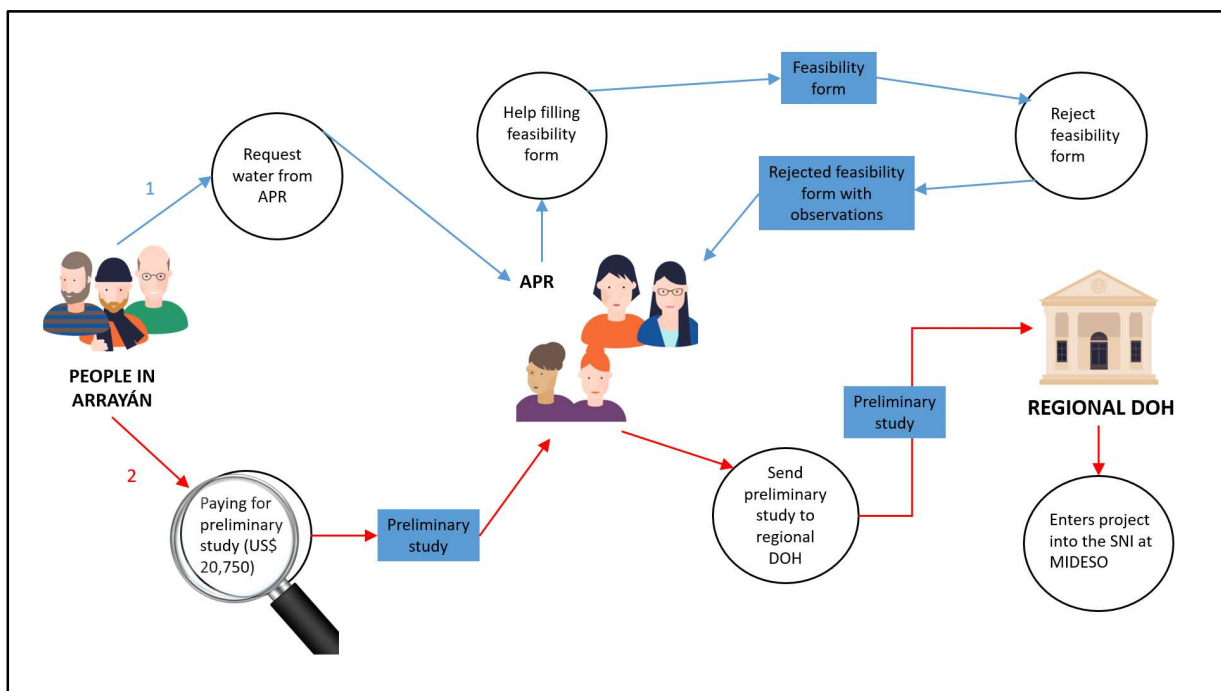
The blue arrows in figure 13 illustrate the first sequence of institutionally observed actions beginning with people's request for water. As a result, the work of Susana at the APR is to complete the feasibility form on behalf of each household. The completed feasibility form is sent by the APR manager to the regional DOH where it is assessed, rejected, and returned to the APR with the observations included in figure 12.

The red arrows in figure 13 show a second sequence of text-mediated actions where the people from Arrayán paid for the preliminary study after the feasibility form was rejected by the DOH. However, there is another process intersecting with this sequence which is the text-mediated process by which the people from Arrayán are classified as "non-vulnerable" and are made responsible for the commissioning of the study and for paying part of the investment. The magnifying glass in figure 13 indicates I will explore this process in more detail in Chapter 8. The work done in each location is illustrated by circles, whereas texts are represented in blue boxes. Both sequences begin with the work of the standpoint participants and incorporate the work of other people located in other places such as the APR workers, the engineers developing the study, and the regional DOH deciding on the feasibility form. Both sequences of actions are textually mediated. For instance, the preliminary study developed by a private engineer needs to follow the guidelines for public investment in APRs (MIDESO, 2015b) which were the same ones

used to assess the feasibility form. These guidelines will come up again when looking at the I&E project fund application process, which I explain in Chapter 7.

When the engineering study was completed, the people from Arrayán gave it to the APR who acted as a mediator between the community and the regional DOH. The APR presented it to the DOH and people working at the DOH entered it into the *Sistema Nacional de Inversiones*¹¹³ (SNI) centralised in MIDESO. As Ana explained, individuals cannot present a project to the DOH on their own, this must be done through an established APR Committee. This is how the efforts of the people from Arrayán become for the first time visible within the institution of rural drinking water and are entered into a complex of text-mediated social relations that go beyond the local setting.

Figure 13: Sequence of actions stemming from work practices at the local setting



Source: Author

¹¹³ National Investment System

Necesitamos menos burocracia y más acción¹¹⁴

The DOH, a department within the MOP, has its own funds which come from their portfolio and are stipulated in Law 21,125 on Annual Budget (Ministerio de Hacienda, 2018). Within each ministry the budget is divided by departments and within those departments, by programmes (DIPRES, 2019). According to a document on the APR website called “Competitive Funds”, there are other sources for funding available to APR systems, such as the *Fondo Nacional de Desarrollo Regional*¹¹⁵ (FNDR) and *Presidente de la República*, among others. This document reads: ‘Competitive funds are mechanisms for allocating resources and give citizens the responsibility to define and implement what they consider they need to improve their quality of life. For social organisations, access to funds is an important tool because it allows them to partake in the country’s development processes’ (DOH, 2019c, p. 1).

The FNDR is a regional fund managed by the *Subdirección de Desarrollo Regional y Administrativo* (SUBDERE)¹¹⁶. SUBDERE is a Sub-secretary of the State with representation in each of the fifteen regions of the country and depends on the *Ministerio del Interior y Seguridad Pública*¹¹⁷. The aims of SUBDERE as stipulated on their website, are to deal with decentralisation challenges and issues of territorial equity with special consideration for the development of marginalised, isolated and extreme territories, providing flexible, timely and pertinent solutions to citizen’s needs (SUBDERE, 2019). The FNDRs can be made up of State resources or of resources stemming from loans established with the Inter-American Development Bank. The way to access these funds is by applying to the SNI within the MIDESO: ‘The interested party should create a project and enter it into the BIP¹¹⁸ where they will get a Ficha IDI¹¹⁹ form [...] Once the project obtains a *Resolución Satisfactoria*¹²⁰ (RS) the GORE has to “prioritise” the project. Once the project has been

¹¹⁴ ‘We need less bureaucracy and more action’

¹¹⁵ National Fund for Regional Development

¹¹⁶ Sub-secretary Regional and Administrative Development

¹¹⁷ Ministry for Internal Affairs and Public Security

¹¹⁸ Bank of Integrated Projects Bank

¹¹⁹ Identification Form for Investment Initiatives

¹²⁰ Satisfactory Resolution

“prioritised”, the GORE requests an identification and budget assignment to the SUBDERE which materialises this through the DIPRES¹²¹.’ (DOH, 2019c). In Santiago I was able to attend a meeting at the GORE where this process of “prioritisation” took place. I realised how demanding this was for social leaders who had to lobby for politicians to get their projects funded. The meeting I witnessed at the GORE in Santiago will be included in Chapter 7.

The “Competitive Funds” document is part of a series of documents available on the APR website (DOH, 2019a) under the “*Documentos*” tab. None of these documents show the year of their creation nor publication, and most of the documents are out-of-date. For example, the document I just described refers to “MIDEPLAN” which was replaced by “MIDESO” in 2012. It also refers to “CONAMA” which was replaced by the Ministry for the Environment in 2010. Similarly, the document on water subsidies talks about the “CAS form” which was the instrument used by MIDESO to assess vulnerability before the RSH. This reveals the poor management of the website showing that only very basic information is available to the people the APR programme claims to serve. Moreover, the way in which the SNI works and how projects are assessed for funding is not available on the website.

When I returned to the Committee in December 2018, I did a presentation of my findings and show Committee staff and standpoint informants a map of the institutional processes I was able to uncover. I realised this process seemed mysterious for the APR administrative team composed by Tamara and Susana who mentioned they were not aware of what went on outside the Committee. They said they usually hear the manager and president talk about the GORE and the MIDESO, but they had no information about how those government bodies were involved in the funding of the I&E project. They welcomed the map I presented and found it useful. However, José, Fito and Juan were aware of all those details as they had to become knowledgeable about the processes I mapped in order to pursue their objectives. Interestingly, I realised the details on how decisions are made within this process was also mysterious for some of the employees

¹²¹ Acronym for *Dirección de Presupuesto de Hacienda*, which translates as Budget Directorate, a dependency of Treasury.

working at the DOH, as I will explain in Chapter 7. Anyways, what Tamara knows is that it took five years for the I&E project to be implemented:

Tamara: If the Committee invested a lot of money in solving issues then things would improve a lot faster, but that is something that has to do with resources. It is so bureaucratic, and it takes so long to do anything! You need an approval to do this, then you need to look for the money to do that. We need less bureaucracy and more action (Interview with Tamara, administrative team APR).

Not only do these processes take time but as explained by the president of the APR, they also take a lot of work and persistence from the members of Arrayán, the APR president and the manager. In fact, even once monies were allocated there were delays in the project's implementation. The APR president voiced her frustration about not getting replies from the DOH and having to knock on their door several times until getting a reply:

Mariana: 'Our relationship with the DOH is good now, but only after I went and talked to them. I had to put on a show because they weren't paying attention to me.' (Interview with Mariana, President of APR).

Nosotros no somos corazón de abuelita aquí¹²²

I was able to see that a great deal of the time and work of members of staff was dedicated to filling in a form to request benefits on behalf of those members of the Committee who needed access to subsidies for their water bills. The instrument selecting those who are eligible for this benefit is also the RSH. Susana's view about the implications of the RSH and how accurately it measures vulnerability is clear in this excerpt:

¹²² "*Corazón de abuelita*" is a Chilean idiom which translates into English as "Granny's heart". It is used to refer to someone with a "heart of gold", a very good person. This is a quote from an interview in which Mariana explains that the Committee cannot have a "heart of gold" and help everyone, as people need to help themselves and find a way to pay for their contribution to the I&E project.

Susana: Now you need to be vulnerable to get any benefits from the State. They know immediately whether you have a car, a house, etc., because everything is online now. For example, I don't have a subsidy and have no right to benefits. You practically need to be indigent to be eligible because having a small business works against you. (Interview with Susana, administrative team APR).

Susana explains that if people do not pay their water bill within three months, their subsidies are revoked. Moreover, subsidies only cover up to 15m³ of water usage and up to 50% of the total cost (APR, 2018). I thought about Fito's comment regarding their contributions to the project 'luckily we are not amongst the poorest group. We are not rich either'. I asked the president of the APR what would have happened if the people from Arrayán could not raise US\$ 20,750 to pay for the preliminary study. To this, Mariana replied:

Mariana: I don't know. They have to make the effort, they have to look for funds, they need to work for it. The SUBDERE releases the funds [for the project implementation] once the project is inside the system. Before that, people must hire a consultant themselves and come up with a study with the pros and cons, the impacts of the project, etc. That study must be paid by those requesting water. This is normal, because we are no granny's heart here, each one finds their own means (Interview with Mariana, President of APR).

The institutional discourse apparent in the APR website and materialised in texts which highlight community values such as 'mutual aid' (MOP, 2017, p. art. 66) are undermined by such text-mediated practices. Moreover, and as described in article 2 of Law on RSS 'rural sanitary services are defined as those providing non-for-profit drinking water and, or sanitation services according to what is described in this law with the due investment and training provided by the State' (MOP, 2017, p. 2). This ideal situation is in contradiction with the practices experienced by standpoint informants including: financing the engineering study, paying for a proportion of the project and, having to pay for the highest membership fee in the country (Interview with Leader of Community Development, APR Programme, Santiago). The discursive organisation of the APR programme is in contradiction with Juan's views when he says he does not understand why water

has been privatised, when it should be a human right. The president of the APR also perceives this disjuncture.

Mariana: 'They always put obstacles for us [the Committee] to apply for funds [...] because they say this is a large APR and we have a current bank account. But these are things I really don't understand! Because we're not filling our pockets with money here, we are non-for-profit and although we have a bit of money to make some repairs, this shouldn't prevent us from applying for public funds.' (Interview with Mariana, APR President).

Mariana is talking about the *Presidente de la República* funds which seek to benefit non-for-profit organisations. People can apply as long as they can prove they are living in a situation of poverty, and they need to indicate how beneficiaries will contribute to the project, either economically or through their own labour (DOH, 2019c).

Este proyecto lo podríamos haber hecho nosotros¹²³

In general, people working at the APR are not happy with the work of AdV, the TU representing the DOH. Ana thinks AdV is disorganised and does not provide the support the APR needs. She mentioned in several occasions this company has the water monopoly in the region which means that if they wanted to have a different TU that would be impossible as there are no other options. In this sense, Ana describes AdV as being judge and jury as they are at the same time the APR's water provider and the entity representing the authority.

The manager and the president feel that most of the responsibility for handling the issues arising from this project fell on them.

Ana: The problem is that the inspector from AdV who is responsible for supervising the works of this project [the I&E project] doesn't come often. The owner of the contracting company, Oper

¹²³ 'This project, we could have done it ourselves' (Fieldwork notes, 2017).

Plant, actually lives here in the area, but nobody has ever seen him. He never comes to check how the works are going. (Interview with Ana, APR Manager).

The women from the administrative team need to deal with members' complaints about poor water services and the lack of water when OP interrupts the supply to do works on the pipes. Moreover, OP's employees have made several mistakes while working on the system, which then the APR operators need to solve. For example, at the time of my fieldwork one of the operators found chicken bones inside the pipes. Don Martín, the oldest of the operators and who has been working in the APR for more than 15 years, is frustrated by the way OP works and blames Ana for this. He says she should be on the ground, supervising them to avoid any problems. However, this is the job of AdV as the TU (Interview APR Director, Coquimbo).

Ana and Mariana speak highly of Don Martín as they recognise his in-depth skills and knowledge of the water system, which he has gathered during 15 years of work in the APR. They told me Don Martín came up with the ideas behind the I&E project and that these gave shape to the preliminary study which included improving the efficiency of the water accumulation and delivery system. In conversation with Don Martín he mentioned his views about the project and how it has been handled:

Don Martín: this project, we could have done it ourselves, we could have hired more people and taught them how to do the work [...] it's like they [OP employees] think we don't know anything. But at the end of the day, they come to me for help and they ask me everything [...] This project should've been finished by June 2017 and is now delayed by more than 5 months. (Interview with Don Martín, Operator APR)

I witnessed how OP's employees were trying to find a pipe and spent hours digging until they called Don Martín who found the pipe within a few minutes. He was worried because people working for OP and AdV had not explained to him how the newly installed automated system works. They have not either tested the system in order to assess whether there are any issues with it. The operators and the administrative team have mentioned how embarrassed they feel

when giving members an explanation for the poor quality of the service. Susana, as member of the administrative team, believes OP must have been the only company interested in implementing this project. She believes the APRs are a *cacho*¹²⁴ for the government. This reveals there is a feeling APRs are not a priority, and that they are a problem for the State as they are expensive and need constant supervision (Interview with SISS Officer, Coquimbo).

However, and in contrast to the views of Don Martín and the manager about the lack of professionalism from OP there is an idea that private sanitary companies are more efficient than APRs and that they have expert technical knowledge. This also reveals a lack of authority for experiential and local knowledge accumulated by APR operators who have been working in the site for 15 years. This is echoed in a conversation I had with one of the directors of the Committee:

Cristóbal: AdV has a technical team who come and supervise whether things are going OK or not. This is because we don't have the capacity here, we are not experts. That is why we take expert advice from AdV who are engineers, professionals. We do hire operators here, but they aren't skilled and they can't do engineering calculations (Interview with Cristóbal, Director APR).

Cristóbal is detached from the work that goes on in the Committee, the work that Mariana, Ana, the operators and administrative team deal with daily. In his talk there are traces of a lurking discourse on professional and expert knowledge as being more desirable over that of rural people working as operators of the system, based on the idea that private sanitary companies are more skilled to do this job. In contrast and as Don Martín, Ana and Mariana see through their own experiences, both companies: OP and AdV, are unprofessional and cannot be trusted to do a good job. The disconnection this member of the board of directors shows with the work happening on the ground, is revealed in Mariana's comments:

Mariana: the other directors do not help with anything, their commitment to the board [of directors] has been minimal and they are always complaining about the lack of a salary. They

¹²⁴ *Cacho* in Chilean slang means a burden, a nuance, something that is time consuming, something people avoid doing.

never come to our meetings and then Ana and I need to do all the work, their contribution is zero (Interview with Mariana, APR President).

The lack of supervision by the ITO from AdV and the poor work of OP produced additional stress and conflicts within the APR team, which deteriorated during my fieldwork. Ana complained about the lack of support she received from the rest of the team and there were growing tensions and disagreements.

Ana: Being a woman in this environment is difficult; you need a lot of character. Fortunately I do, but oftentimes this plays against me because I have a firm temper so I have problems especially with women because of my way of dealing with issues. I don't go around doing women's stuff; I am firmer and strict so that gets me in trouble. The biggest issues I have here are with Don Martín who is older. He likes working on his own and is not used to receiving orders. His behaviour is copied by the other two operators, so that is my biggest problem here you see? When I go to meetings at the DOH and talk to all of them, my word there counts, they listen to what I have to say because I know what I'm talking about (Interview with Ana, APR Manager).

Moreover, as part of the contract between AdV and DOH there are compulsory workshops and talks APR workers and directors need to attend to. However, these workshops are regarded by workers as a waste of time as they are not specific to the Committee's needs. These are usually presentations AdV shows to all APRs in the region, regardless of their differences and particular needs:

Mariana: They should deliver the workshops we need, because it's very boring and it is a waste of resources and time that could be used in other things. They go to Ovalle and teach the same course, they go to Vicuña and the same [...] We used to go all the way to Ovalle. But now they expect us to pay our own way there, so we don't go anymore, because you lose the whole day! (Interview with Mariana, APR President).

Tú haces esto por tu comunidad¹²⁵

In this section I explore the ideas behind the work and time the president of the Committee dedicates to the APR. Mariana has mentioned that her ability to work for free in the role of president of the board of directors, stems from her vocation and her love for the community:

Mariana: You do this because you like it, because you fight for your community, for your people, and you want it to improve. People always ask me 'how do you do this?' and I say it's all about having the right attitude. You need to be responsible and you need to learn and know what you're doing. I didn't know anything about this at the beginning, but I learned. If you do this, you do it for the love of it and because you have a strong vocation. These things are done by a vocation, not by obligation (Interview with Mariana, APR President).

The discourse about making things happen and working for your community and village to develop relates to self-sufficiency, fighting for your well-being, and working for water instead of this being a State responsibility towards its citizens. This idea is also found in the work and involvement expected from Arrayán community organisation, in terms of devoting time, effort, and their own resources to improve their quality of life and get access to drinking water.

As I revised interview transcripts and APRs official documents I began to trace institutional ideologies through a series of discourses discovering how the APR programme operates in such a way that shows how the work people are busy doing in the local setting is shaped by texts with distinctive 'master frames' (Naples, 1997, p. 908). I started seeing how institutional documents, such as the one referring to the funds APRs can access and 'which give citizens the responsibility to define and implement what they consider they need to improve their quality of life' (DOH, 2019c, p. 1) mirrors Mariana's talk about self-sufficiency. As DeVault (2006) indicates, local programmes are shaped by legislations that respond to particular discursive frames which 'are drawn from and tied into a "meta-discourse" of neoliberalism that supplies overarching ideas to

¹²⁵ You do this for your community.

be elaborated specifically for different institutional areas' (DeVault, 2006, p. 296). For example, a discourse that comes across in Mariana's talk is what Griffith and Smith (2005) call the "mothering discourse", which is revealed when she explains the nature of her job and why she is able to work in a voluntary basis at the APR:

Mariana: Not everybody can do this, because the rest of the people don't have the amount of time I have. I think I must be the exception, because I'm on my own, I'm a single mother and I have many needs, but I make it work. Other *dirigentes* have a job, but I prioritised my son. My mother helps me with some money, it's not too much but it helps. I have my house, I don't have expenses, so there are many factors that help. Sometimes I do a bit of work here and there, but this fills my soul, I'm not ambitious, otherwise I would never do this (Interview with Mariana, APR President).

As indicated by Smith (1996), institutional discourse is present in the talk of standpoint informants and people situated in the local setting. In their language there are traces of an organisational environment, which reflects the way the world is known in common. In this case, the lurking discourse is that housewives and mothers are in a better position to dedicate their time and effort to community water management. This discourse also reveals the idea that single mothers are not ambitious, so they are more comfortable or likely to do vocational and social work than women without families, married women, or men. When I think about the idea of "caring" for community and the "care work" women so often do, I remember the words of Marjorie DeVault when she describes her own discomfort when using the word "care": 'my topic is activity without a name, activity traditionally assigned to women, often carried out in family groups; activity that I know by experience but cannot easily label' (DeVault, 1991, p. 4).

Throughout my fieldwork I met women working as presidents of local APRs such as for example, the president of the Federation who is also a single mother like Mariana. These women can do the work the State does not because they usually receive economic or in-kind help from their own mothers and grandmothers. As I was able to see, the work of women is essential in the delivery of drinking water to rural areas and in the accomplishment of the APR program's objectives. However, this is not adequately recognised as a job in which development policies

rely on. When acknowledged officially, it does not go beyond praising women's contributions in a language of values but (MOP, 2004) with no greater implications in terms of actual practices that would improve people's quality of life or provide them with a salary.

This ideological code of "mothering work" for water access is reinforced by the talk of people positioned higher in the institutional hierarchy. In an interview with the national SISS Audits Manager I asked: 'how do people working for free make a living?' To what he replied:

They are housewives, they might have a part time job, a lot of people do it and this is why it's so admirable because these people do it for a service to their community, it's full of them. Go to a Neighbourhood organisation, do you think those folks get paid a salary? That is why I admire them... (Interview with SISS Audits Manager, Santiago)

I want to highlight the way in which expectation on the role of women, rural and other marginalised people more generally are institutionally created and replicated on the ground, revealing the organisational and discursive power of this ideological code. As DeVault (2006, p. 295) points out, we can see connections between the everyday work processes and capitalist relations that highlight specific conceptions of 'mothering work'. IE reveals a 'broader view of the interests served by this kind of textualization' (DeVault, 2006, p. 297) of mothering work, which sustains several aspects of "community water management", an idea I will revisit in Chapter 9.

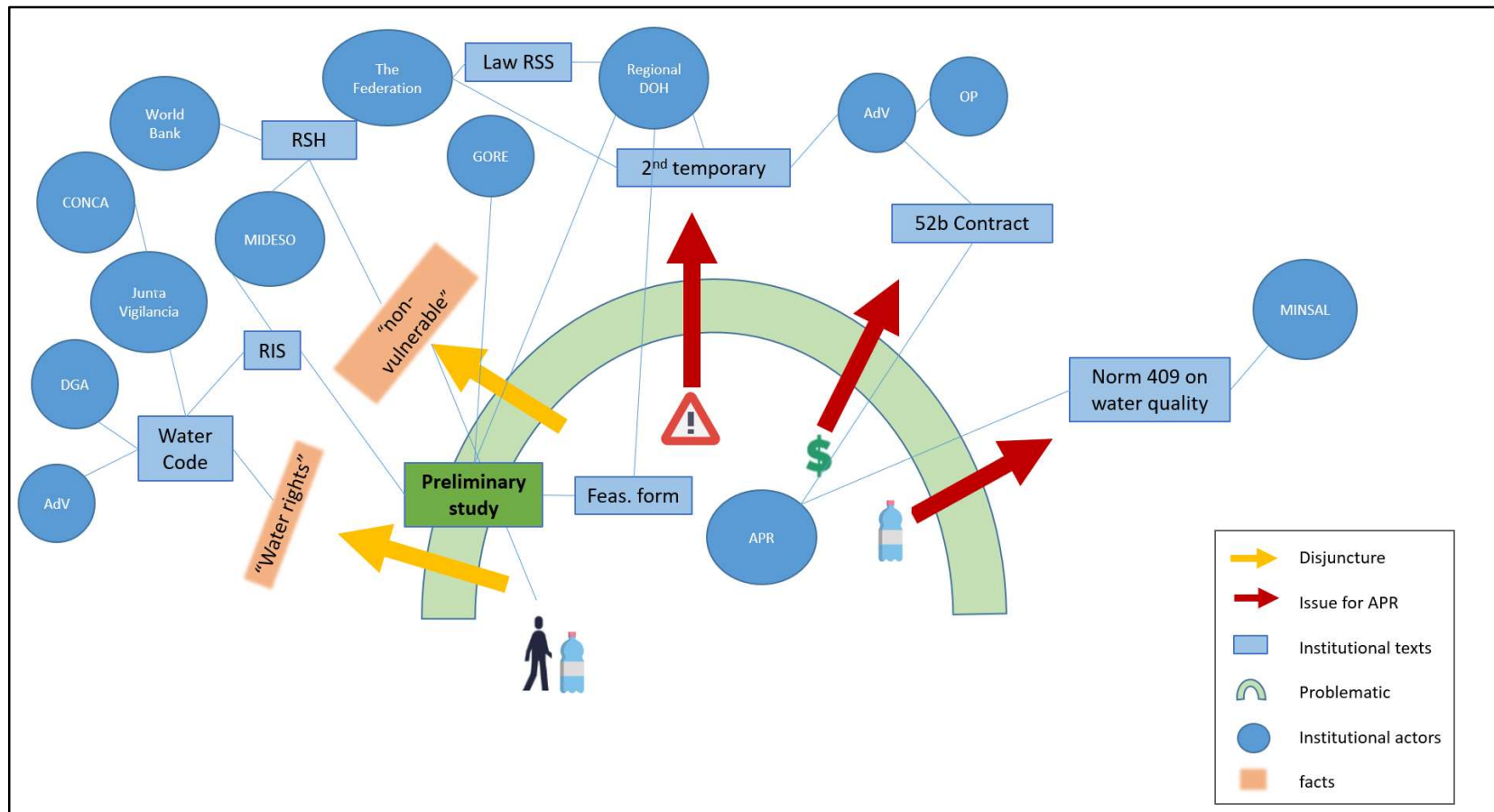
The analytic work of discovery must take place in relation to actualities experienced by standpoint informants. In an attempt to clarify how they were affected by the ruling relations of drinking water management, it was useful to move into the local setting of the APR to discover how access to drinking water is organised to work as it does for Juan. I have identified people whose subordinated experiences are ruled by a particular social organisation that creates unequal access to water by definite people. This is the puzzle that the two disjunctures experienced by Juan will help me uncover. The accounts described in this Chapter however, uncovered the work and the difficulties of people at the APR who are managing the very access (or not) to drinking water that standpoint informants want to obtain. It also uncovered the worries and efforts of those who are already members. As Smith (2006) mentions (Smith, 2006),

discovering the problematic that organises the research may not necessarily depend on one person's experiences.

As the figure below shows, the problematic was informed in part by the concerns people had in the local setting and which were voiced during the PAC event. These concerns relate to the problems the implementation of the I&E project was bringing to the community. In addition, the disjunctures stemming from standpoint informants (yellow arrows) provided the need to explore the construction of facts such as "water rights" and "vulnerability". I could have chosen other analytic threads such as the lack of sewerage systems in rural areas, or the problem of expensive water tariffs and low water quality (red arrows) which were pushing people in the APR to buy bottled water. Nonetheless, I pursued the preliminary study to explore how different institutional actors and their actions were coordinated through texts to accomplish Juan's experiences. All the concerns illustrated in figure 14 (yellow and red arrows) reveal the lack of priority APRs are given, and the feeling at the local setting that APRs are a "*cacho*" for the government.

This Chapter has brought forward the overarching problematic of my research (figure 14). I have explained how the problematic emerged from the experiences of standpoint informants in combination with the issues highlighted at the PAC event. I also detailed the work practices and processes in which the APR members of staff and directors got involved in response to Arrayán's request for water. I have mapped and explained the first steps in the I&E project pipeline: the filling of the feasibility form including its rejection at the DOH, and the commissioning of the engineering study paid by the people from Arrayán. The following Chapter will examine each step of the textually mediated work processes involved in the I&E pipeline. In doing so, I will describe the work practices people at different levels of government engage in to accomplish the project's funding by the State, and its implementation in the local setting.

Figure 24: Research problematic



Source: Author

Chapter 7: The textually mediated I&E project

This Chapter describes the social organisation of water management as I moved into extra-local settings to discover the people, texts and institutional forms of coordination that play out in the lives of those who need water in rural Chile. As mentioned earlier, the feasibility form gave way to the preliminary study which was presented to the regional DOH and entered into the *Sistema Nacional de Inversiones*¹²⁶ (SNI). I became interested in this process as the implementation of the I&E project was a central feature in people's daily experiences and was having concrete effects in the local setting, reorganising the work practices within the Committee.

Despite its relevance in people's lives, there was no information on the APR or DOH website about the extensive textually mediated practices and the work of different government institutions involved in organising the achievement of the I&E project.

When I returned to the field in December 2018 and presented the maps I made of the ruling relations of the I&E project, I realised the workers within the APR were not aware of what happened outside the Committee's offices and in extra-local settings. Moreover, although standpoint informants had become very knowledgeable about the I&E project, they were unclear about the textually mediated work practices going on at the national level. They had not heard about the Law on RSS and the current attempts to change the Water Code. What I explore in this chapter are precisely those text-mediated sequences of actions I call "the I&E project pipeline" and I provide maps of the ruling relations at work within this process, which I showed the participants once I returned to the APR. I describe the work practices and texts used in each setting and pay attention to the ways in which people in the extra-local world talk about water management and access and note how some of these views differ from those of the standpoint informants and people working in APRs.

¹²⁶ System for National Investments.

Following the preliminary study

Once the preliminary study is entered into the SNI by people at the regional DOH, the MIDESO becomes involved. I visited MIDESO in Santiago where I talked with an officer from the Investments Department and with the Informatics Project Manager who explained to me the next steps in the sequence of the I&E project pipeline. I found out there was an information system called *Banco Integrado de Proyectos*¹²⁷ (BIP) where an investment initiative is presented to MIDESO. The BIP is an online platform for the management of public investment processes through the registration of projects, programmes and studies requesting public funding. The BIP produces the *Ficha de Identificación de Inversión*¹²⁸ (Ficha IDI) which is a summary of the fund request containing the project's basic information. The process of technical and economic analysis begins with the reception of the *Ficha IDI* by MIDESO and ends with the result of its analysis, which consists of checking whether the initiative was correctly formulated.

MIDESO's employees assess whether the investment initiative contains all the technical and economic information required by the *Normas de Inversión Pública*¹²⁹ (NIP), which are divided according to sectors and described in the *Requisitos de Inversión Sectorial*¹³⁰ (RIS). Rural Drinking Water projects, which are those I was interested in, fall under the 'Water Resources' investment sector. The responsibility for this assessment process rests within the central level of MIDESO. As I learned through interviewing people at the regional and central levels of the DOH, the guidelines for project assessment say the annual population growth is of 2% whereas in fact population growth is around 12%. Therefore, water systems built under these parameters run short sooner than expected. This is something Ana mentioned when she said more people are arriving to the area and requesting water, which makes the system unable to alleviate demands. This under-estimated population growth comes from the "Design Norms for APR Programmes" published in 1984 (SENDOS, 1984, p. 10), which could explain why certain technical parameters

¹²⁷ Bank of Integrated Projects.

¹²⁸ Identification Form for Investment Initiatives.

¹²⁹ Norms for Public Investment.

¹³⁰ Investment Requirements by Sector.

might not currently make sense. These same norms established a water endowment of between 100 and 60 litres per person per day (SENDOS, 1984, p. 10) however there is no explanation about how that decision was made and why.

MIDESO's rules

The *Requisitos de Inversión Sectorial*¹³¹ (RIS) for APR projects are detailed in a document available on MIDESO's website (MIDESO, 2019b). On this document there is a link to the methodology to be used in the formulation and evaluation of APR projects where the suggested endowment is between 100 and 150 litres per person per day (MIDESO, 2015b, p. 12). I later realised these RIS were the guidelines used to assess the feasibility form and which made up the interpretive frame described in box D, figure 11. The WHO recommends about 20 litres per person per day for basic hygiene, however this amount does not include laundry, cooking, or bathing (World Health Organization, 2019). These figures vary across countries. For example, in the UK each person uses about 142 litres per day (Energy Saving Trust, 2013). The RIS document for APR projects (MIDESO, 2015b, p. 4) states that reference costs should be considered when evaluating these projects and that in order to prove the water rights situation, one of the following institutional texts is required: a document proving ownership of the water rights such as a certificate of registration or a granting resolution; a report from the DGA indicating there is water availability in the sector; or, a document proving the offer of rights in the project area.

The social evaluation of projects determines to what extent an investment project will have an economic and welfare effect. Two evaluation approaches are used in the SNI (MIDESO, 2015b). One of them is the "cost-benefit analysis": this is 'done to identify from a set of alternatives for investment initiatives the one that generates the greatest net benefit for society. It requires identifying, quantifying, and valuing all the benefits and costs of the project and obtaining

¹³¹ Investment Requirements by Sector.

indicators such as the Net Present Value and the Internal Rate of Return to assess the economic profitability of the project' (MIDESO, 2015b, p. 13).

A second analysis is a "cost-efficiency" one 'which assumes that the benefits are desired by society, so the monetary value of these projects is not calculated. This approach implies evaluating alternatives that provide similar benefits, to identify those using the least amount of resources. A complete identification, quantification and assessment of the costs associated with the project is carried out. Then, indicators such as the Current Cost Value and the Equivalent Annual Cost, are constructed' (MIDESO, 2015b, p. 14).

The same MIDESO (2015b) document mentions that investment initiatives for APR projects will be assessed by using a cost-efficiency approach. The same document establishes the costs of a pre-investment, investment, and operation costs for APR projects. Pre-investment and investment relate to the infrastructure and equipment needed for the production and distribution of drinking water. Operation costs allow for the operation and maintenance of the system. Operation costs are divided in production costs (chemical products, energy, labour of system's operator), maintenance costs (treatment plant, filter cleaning), and replacement costs. On a different item and at the end of the section on costs, the document indicates '...social costs result from adjusting private costs according to the correction factors of social prices that correspond to each of the cost components of the project under study (labour, currency)' (MIDESO, 2015b, p. 15). What is meant by these concepts is not explained and there is an underlying assumption that those reading this document will be trained in this specific speech genre¹³². What is not included within this speech genre is the personal cost for being a member of the board of directors or the sacrifices in time and economic resources Mariana and others *dirigentes* experience. The terms of the RIS and the NIPs frame what can be viewed as social costs and what is not relevant and it is done in a language that excludes those without knowledge in finance or economics.

¹³² Smith sees speech genre as the social organisation of a sphere of activity, what we call discourse. Speech genres organise consciousnesses among people in action. This is key, as it sees talk and utterance as a form of coordination of particular local sequences of activities among participants (Smith, 2014).

Working towards the RS

The analysis of investment initiatives must prove their technical and economic convenience based on the project's social and economic profitability. A report is issued for that purpose and expressed through the *Resultado del Análisis Técnico-Económico*¹³³ (RATE) on the IDI form of the BIP (MIDESO & DIPRES, 2018, p. 10). The ideal RATE is the '*Recomendado Satisfactoriamente*'¹³⁴ (RS) which is when the assessment concludes the investment initiative provides all the information supporting its implementation. An '*Objetado Técnicamente*'¹³⁵ (OT) result is granted to initiatives considered as not suitable for public funding. A '*Re-evaluación*'¹³⁶ is issued when the initial proposal is required to be re-submitted due to the need for significant changes. The last category is '*Incumplimiento de Normativa*'¹³⁷ where the project is deemed not to comply with the RIS or NIPs. If the project needs to be reassessed or needs more information as it was the case for the I&E project, the proponents will have to work on the observations until the project gets an RS. An example of a *Ficha IDI* for an APR project which obtained the RS after the technical-economical assessment is in Appendix Two. This *Ficha IDI* includes the number of beneficiaries, the cost of the project, the date of implementation and points out that the life span of this project is 20 years. Interestingly and like the case of Algarrobo-Viejo, the APR benefitting from the funds will expand its capacity to provide water to 75 additional families as the system had been built in 2002 when the sector was entirely rural. As this *Ficha IDI* states, there is a part of the APR area which is currently inside the urban limit due to the expansion of the city of Castro. I later found out when talking to DOH employers that this was not uncommon as cities are constantly expanding. In a conversation I had with Pamela at the regional DOH, obtaining an RS is not a straightforward process:

Pamela: The application of Algarrobo-Viejo's project to the SNI was a "forcep". It took us more than two years to obtain the RS because MIDESO made observations until in their opinion all of

¹³³ Result of the Technical and Economic Analysis.

¹³⁴ Satisfactorily Recommended.

¹³⁵ Technically Objected.

¹³⁶ Reassessment.

¹³⁷ Non-compliance.

them were satisfied. The main issue was water consumption because people there [in Algarrobo-Viejo] use a lot of water. In general, we normally consider 120 or 150 lt/person/day, but people in Algarrobo-Viejo were using more than 200 litres per person per day. MIDESO asked us to clarify this because it's too much. (Interview with Pamela, regional DOH).

Note that Pamela is talking about figures that construct a very specific version of the actualities that are deemed adequate for APRs. She is presenting a figure of litres per person per day that is in contrast with the figure regarded as acceptable for rural water consumption. This form of documentation and its importance in the application process triggers activities in the local setting revealing its power as organiser of the Committee's accountability within the institution, and on how credible their need for water is. Besides having to provide knowledge about the cost-efficiency of different alternatives, Pamela needs to justify that amount of water consumption to MIDESO. The amount of water used within the Committee is also a measure of Ana's efficiency as the manager of the APR. This is why Ana dedicates part of her time to calculate the difference between the price the Committee monthly pays AdV for water, and the amount of water they actually use which reveals water losses she attributes to leaks, pipe breakages and thefts.

Something I noticed was that the management of the APR goes beyond the production and delivery of drinking water; it involves other tasks that relate to accountability processes. Ana and Mariana realise that the amount of water specified in the norms is an indicator of their managerial effectiveness. Therefore, they are cautious about letting into the APR people who might be using drinking water to 'fill in their swimming pools' as Ana confessed to me. These activities and water usage make the APR look as if people were, on the whole, consuming more water than they should.

Pamela's work is to both vouch for the APR and for the people from Arrayán, being proactive in negotiating with the authorities at MIDESO and justifying the need for the I&E project. She mentioned her strategy was to say 'this was the historical rate of water consumption in the area as people have always had vegetable patches'. She is proactive in this course of action and at the

same time complies with the regulations and mandates of the application process. She displays her agency through her knowledge of how applications work and on how to “game” the process. She is in the middle of two worlds: the local setting where there are people managing the water system and providing her with information, and the extra-local world where she needs to accomplish the textual representation of the APR in terms the institution would consider acceptable. Ana needs to provide Pamela with a figure that would allow her to do her job and that would justify the inclusion of more people such as Juan, into the APR.

While talking to Pamela she clarified that the resources for the I&E project came from the budget allocated to the MOP on the Annual Budget Law. I learned that not only extra-sectorial funds needed to go through this “pipeline” but also those allocated to the MOP through the Annual Budget Law. This means that projects of specific ministries need to be “prioritised” by the *Consejo Regional*¹³⁸ (CORE) in each region, as I will explain in the next section.

After having talked to people at the DOH in Coquimbo and Santiago, I visited the central building of MIDESO in Santiago where I talked to the Informatics Project Manager who told me how the evaluation of APR projects works. I also talked to an Investments Analyst who joined our meeting. The Informatics Project Manager explained:

We do a social assessment of the projects to determine whether the resources invested will have a social benefit. In the case of APRs, a cost-efficiency formula is run between different alternatives. The project’s benefits are not valued monetarily because we assume these projects are socially desirable. Therefore, we study the most appropriate and most efficient alternative for a specific territory (Interview with Informatics Project Manager, MIDESO Santiago).

The Manager explained ten years ago MIDESO used to measure profitability. However, the economic return of APR projects is no longer questioned and water projects do not need to

¹³⁸ Regional Council.

provide a Net Present Value¹³⁹ above 0% to get approval. Instead, MIDESO looks for the least expensive projects but those that are

‘well dimensioned, well designed, without excessive dotation or growth rates. We are still asking for the projects to be profitable, which means we want them to have a positive social impact but without a stratospheric cost. It is still an economic assessment, but not a financial one’ (Interview with Informatics Project Manager, MIDESO).

This is an accounting procedure that makes visible the importance of funding alternatives for water systems that are cost-efficient. The preliminary study compares different alternatives in a “rational” way and with concrete figures. The Manager is describing a transition from a process in which APR projects were assessed monetarily to an assessment about “efficiency”, which might mean choosing the cheapest alternative. When I heard this explanation, I remembered something Susana mentioned when I was in the APR. She wondered whether OP was the only company applying to implement the I&E project as she considered their work disappointing and unprofessional which is also at odds with what people in the local setting expect from a private professional company. However, it might have just been that the alternative chosen was the cheapest one, and might not be considered a relevant project by OP.

Note the Manager says ‘...it is still an economic assessment, but not a financial one’ to show changes have been made in the right direction, and that APR projects are no longer restricted by financial assessments. This change in the relations of ruling of State funding is materialised in texts that organise work at various scales such as at the level of the APR and the regional DOH. For example, the APR manager and president engage in efforts to position their Committee as “efficient” in managing water and those efforts are mandated in an institutional process by which certain aspects are made visible while others are not even considered. In this case, the RIS and their institutional mandates justify assessment decisions. This analysis reveals that the socio-

¹³⁹ Net Present Value is the difference between the present value of cash inflows and that of outflows over a time period. This value is used in investment planning to analyse the profitability of a project.

economic evaluation taking place at MIDESO has a focus on money, ignoring other aspects that might be more important to people's lives such as access and delivery of quality water for human consumption. Water for human consumption is a consequence of cost-efficiency measures and not valued on its own right. This application and its evaluation process are an effective way of institutionally ignoring access to water as a basic human right. In a similar fashion to what I described in Chapter 5 in relation to the Water Code, the human right to water is subjected to a course of action that relies on economic assessments of alternatives for water provision. The RIS is a lower-order text that acts to reproduce the mandates of the Water Code. As I will explain in Chapter 8, the RIS and the Water Code are not the only mechanisms preventing people from accessing water, but the RSH is another important organiser.

Work practices at the CORE

Once the project obtains the RS, it goes through the next stage where *the Consejo Regional*¹⁴⁰ (CORE) discusses the initiative among other regional investment projects. The funds for the project implementation are allocated only after the CORE has given it "priority".

COREs are public bodies with normative, decision-making, and supervisory powers which work within the scope of the responsibilities ascribed to Regional Governments (GOREs). They are responsible for making effective the participation of the regional community. There is one CORE in each of the 15 regions in which Chile is divided. These councils together with their respective governors, constitute the *Gobiernos Regionales*¹⁴¹ (GOREs). COREs were created through a constitutional reform made in 1991 and implemented with Law 19,175 on Government and Regional Administration (Ministerio del Interior, 1992) and are integrated by councillors who are democratically elected and whose work period lasts four years with possibility for re-election. A CORE president is elected for 4 years by absolute majority (Ministerio del Interior, 1992). Pamela explained the implications of the CORE's decision-making processes for DOH projects going through the "pipeline":

¹⁴⁰ Regional Council.

¹⁴¹ Regional Governments.

Pamela: The implementation of our projects depends on the CORE and whether they understand the importance of the APR programme. Strictly speaking, they could reject the prioritisation of our projects which means they would not get funding. But the need for water is such that our projects are most likely to get through (Interview with Pamela, regional DOH).

I learned that this is the case not only for projects whose funding comes from extra-sectorial sources, but also for those projects funded by the DOH which according to Pamela make up for more than 90% of water system projects. However, a professional at the Investment Department within MIDESO said:

When the monies come from FNDR sources, drinking water projects must compete against other projects such as football courts and local schools. (Interview with Investment Department Officer, MIDESO).

This is echoed in another interview I had with the SISS Audits Manager in Santiago:

Public resources are limited and all these sort of projects [APR's] are assessed socially by the MIDESO just like any community centre, football court or hospital. The assessment looks for the project with the greatest social benefit measured by investment, number of beneficiaries, and operational costs. APRs not always win as sometimes they benefit fewer people compared to the football court (Interview with SISS Audits Manager, Santiago).

I also found out that the capacity of an APR to buy water rights in the water market is an important factor especially if they cannot access water from a sanitary company. The same person at the SISS added:

The human right to water is not stipulated in the Chilean law [Water Code] as priority, so when you want water rights, you have to compete with all those willing to buy rights. Farmers and miners have a lot more chances to buy than an APR (Interview with SISS Audits Manager, Santiago).

I realised the Water Code as a text enforcing differential access to water in the country was once more, displaying its organisation power by not make distinctions between water uses. Under this boss text, water used for industrial purposes has the same level of importance as water used for consumption.

As stated in the legislation regulating the work of GOREs and COREs (Ministerio del Interior, 1992), COREs can approve, modify or replace projects and initiatives proposed by the Mayor in regard to regional strategies and development plans. The COREs can also assess the GOREs budget and the distribution of FNDR resources per region, as well as sectoral investment allocation (BCN, 2013). I had assumed APR projects would always be prioritised as in my view these were aimed at satisfying a basic human right. However, this is not what I was told when I interviewed a CORE councillor from a right-wing party called *Union Demócrata Independiente* (UDI).¹⁴² The fact that he is from the opposition comes across in this excerpt as he was not in favour of the Governor of the Metropolitan Region in office at the time of the interview:

Investment projects funded by the FNDR are those the Governor comes up with, and they depend on his creativity. The Governor is designated by the President, not elected by the people. But the intention of the Governor is not to prioritise APR projects because they are expensive and will get him a few votes. Governors are interested in doing projects in Maipú, La Florida or Puente Alto¹⁴³ (Interview with CORE Councillor, Santiago).

To provide a glance into the kind of discussions present at a CORE commission and the role of the councillors in these decision-making processes I offer an ethnographic snippet of a rural CORE commission I attended in January 2018 in Santiago, where the Councillor interviewed above was present.

¹⁴² In English, 'Independent Democratic Union'.

¹⁴³ These are highly populated communes in the region of Santiago.

An ethnographic snippet

I attended a rural commission session in the *Región Metropolitana*¹⁴⁴ in Santiago. I was invited to this session through the help of Ignacia who is an active APR *dirigente* from a Committee in Santiago, and the first president of the Federation. At this commission I witnessed how different social actors, not only politicians or government officials, can present their case to the regional councillors and lobby for their support. The discussions they had were around what projects to “prioritise” and the results of the CORE decision-making process were recorded on an *Acta de Priorización*¹⁴⁵.

The meeting took place in a simple, white, and impersonal room inside an old building in the centre of Santiago. The room’s walls were made of thin light panels. There was a white board and large windows where the summer light got in. It was 3pm and it was warm. There was a long table in the middle of the room where at least 20 councillors representing different parties, sat. Some of them looked at their mobile phones or chatted to their neighbour and laughed, others seemed distracted. The president of the Commission asked for attention. The background noise of teacups and spoons, and people coming in and out of the room, (some of them leaving the door open on their way out) gave the impression that everyone was busy. There are two rows of blue conference-like chairs facing the centre of the room where the politicians were sitting around the table. There was another young woman taking notes. She was sitting on one of the blue chairs as the one I’m sitting on. We looked at each other and smiled, we were both trying to understand what was going on.

Listening to this session I learned about a project in Curacaví, a rural commune near the city of Santiago. The Mayor of Curacaví, a young lawyer, intervened to explain:

This Committee works very well but we are always concerned about future risks and about not being able to supply water to existing neighbours and newcomers. We are concerned about the

¹⁴⁴ Chile is divided in 15 administrative regions. The Metropolitan Region is where Santiago the capital, is located.

¹⁴⁵ Priority report.

fact that our projects are not being implemented. Two years ago, we approached councillors Berrios and Gárate, who offered us to speed up the implementation of our projects, bearing in mind the DOH has limited employees. But believe me, when you see the needs of the neighbours, you get the resources, you look for ways to make it possible. These projects got fast-tracked after our conversation and were funded by the DOH, which made us very happy. But what concerns us now, is the fact that we always need to look for ways to implement these projects, which are extremely necessary and urgent as they are about water.

There was another person in this session, the President of an APR from another rural community whose name was María. She attended this meeting so she could tell councillors her neighbourhood was becoming more and more populated which meant requests for water were increasing. Their wells capacity was not enough to supply the new influx of people as they were already supplying water to 273 families, a school, and a health centre:

María: We have been waiting 10 years for this project, which fell through because we didn't have access to the lands, because it's so difficult to negotiate with land owners, they wanted to charge us millions and millions and we don't have money, we are a rural community which is growing and will soon have 700 families. Our situation is critical, that's why I ask you councillors please, don't look at the amount of money for this project but approve it, because people are getting water now from water tankers. I'd like to leave this room with good news so I can tell my people the monies have been approved. If you do so, I will bring my community here for them to see the monies have been approved.

María had been asked her name twice. Moreover, she was asked different questions about her APR's project despite the fact those details were described in the Ficha IDI the councillors had read and on the "Power Point" presentation projected on the white wall. Nonetheless, someone asked her "who is going to fund this, the municipality or the FNDR?", "how are these families getting water now", "for what I can see here, you don't have issues of water quantity in this area, right?" Someone else asks: "What is your name?" for the third time.

There is a mixed conversation in which there are discussions between a member of the DOH and a Councillor. They are discussing who is responsible for implementing this project. Someone says: 'This is a disaster. We approved this 3 months ago and the project is still not being implemented. You know what will happen in the end? Señora María will go celebrate she got 90 million pesos allocated but 2 years later she'll still be waiting for the project to get implemented. Let's explain this to Señora María, so she doesn't leave this room with the wrong impression.'

The CORE representatives discuss among themselves and some of them speak louder than others. In general, it is a messy meeting where conversations are not entirely clear. An angry councillor pounds the table with his fist.

This ethnographic snippet reveals how important the intervention of communal mayors and *dirigentes* is in this process. In the case of people from Arrayán, they were lucky to have Pamela at the regional DOH intervening for them. Otherwise, Mariana would have had to ask authorities and politicians to support their I&E project. The work *dirigentes* go through to get their projects approved explains why Mariana was reluctant to give water to the people from Arrayán, as this would demand more work from her.

As stated in Law 19,175 'The CORE is responsible for making effective the participation of the regional community' (Ministerio del Interior, 1992, p. 28). The only way in which people can participate however, is through lobbying within these meetings. This is the opportunity *dirigentes* and local authorities supporting them get to push for the projects they want to implement in their communities. An important aspect of the work of *dirigentes* is the task of chasing things up. People constantly need to make their needs present and persist in getting their resources approved and projects implemented, even after their projects get the RS from MIDESO. Time in this sense 'is not considered as an abstract property but rather as "the time it takes" ... a dimension central to our generous conception of work' (Griffith & Smith, 2005, pp. 47-48) This understanding of time and work come to mind when considering the effort *dirigentes* put into their work. They need to ask for permission at their workplace, arrange travelling to the city centre and pay their transport cost and other expenses to be able to lobby at these meetings.

Moreover, *dirigentes* need to engage with and learn the institutional language used during these meetings, showing their knowledge about the ‘pipeline’ process and how it works. If they are unable to use this language it will be difficult for them to engage in the process. This reminds me of a long interview I had with Ignacia, the *dirigente* who put me in touch with the GORE Councillor who invited me to this CORE meeting. Ignacia was the president of a large APR in the Metropolitan Region for more than 23 years. She was the first president of the Federation and had an important role in the drafting and negotiating of Law on RSS together with other social leaders from across the country. In her talk, I could see how much this work had affected her:

Ignacia: I used to think when I travelled long distances on buses “Oh God what will happen to my family if I have an accident”, so I decided to hire a life insurance. But I had to pay for it from my own pocket, the Federation never gave me any money towards this [...] I really regret this, I really, really regret being an APR *dirigente*. I am very sorry, but I haven’t had a good time. I have tried hard to make *this work*, I have put all my effort on *this*, I have sacrificed so much. I never thought that one day I would regret this so much. If I went back in time, I would never accept this position again. There is not enough understanding of what we go through, even the people from the Ministry [MOP] they say they care for me, but I feel they don’t really care for us *dirigentes*. Even more so when the *dirigentes* struggle and have a hard time [...] You wouldn’t believe the things I’ve had to put up with: insults, disrespect, aggressions. It is very difficult (Interview with Ignacia, ex-President of the Federation).

Ignacia’s experience and feelings of regret are in stark contrast with the romanticized ideal of *dirigentes* doing their work for the love of their community. There is also sadness and frustration in her words because her work alone will not ‘make this work’. This points to an organisation that does not work for people. It puts all the responsibility for drinking water delivery in already marginalised areas onto the shoulders of *dirigentes*, who do not have the necessary support from politicians, government officials, or even from their own communities. When I thought about Gloria’s experiences of being a *dirigente* and a single mother I realised she is in fact in a different position to that of Ignacia or Mariana. Gloria receives a salary for her work in the Cooperative where she works because Cooperatives have a different law and a stronger structure. However,

her work as a national *dirigente* is indeed voluntary and unpaid. I came to view the new Law on RSS which has been so praised by the official story, as another instrument for oppression where the volunteer work of people like Ignacia is made official. The work of the APRs and the work of more women, grandmothers, and rural men would now be translated and mandated by law. The new Law on RSS only envisions a viaticum for *dirigentes'* travel costs (MOP, 2017, p. art. 56) which will be paid by APR members and not even by the State. This measure might cause more inequalities as larger APRs will be able to pay their *dirigentes* a viaticum while poorer ones will not. This clause does not account for a salary and there is no contract establishing *dirigentes'* working hours. Despite these precarious conditions they will have several legal responsibilities (MOP, 2017, p. art. 54).

Self-management as spectacular

When I interviewed the SISS Audits Manager in Santiago, I asked him about these thoughts I was having and about the experiences Ignacia shared with me, as I wanted to know what he thought of this. This is an excerpt of our conversation:

SISS Manager: This programme is successful because it is not-for-profit. Nobody profits with the system, it is self-sufficient. People themselves make it and that is a very valid, powerful thing. The beauty of this is that you build the infrastructure for them, you organise them and then you give them advice in terms of operation, technically accompanying them constantly, but they are self-managed. They make their own decisions and there are big APRs making their own investments because they have resources. Some of them are large and almost like a sanitary company and they charge a basic tariff, so they are a lot cheaper than systems supplied by the sanitary [...] The good thing about this is their self-management, this is powerful. I believe it's spectacular; it's as if you built them a school and they managed it. I find it spectacular; it is a unique project in Chile, and it is an example for many other countries.

Me: I also interviewed a national *dirigente*. She told me "I regret having got myself into this, I lost more than 20 years of my life in community management being a *dirigente*, but I regret it". She

told me with great sorrow, that her work was very poorly valued and that she never received a salary. What do you think of this?

SISS Manager: Ok, but she is completely mistaken, I'm telling you. Because the beauty of this is that *dirigentes* don't receive a salary, that is the important thing.

Me: But who can afford this?

SISS Manager: It's full of people doing this, presidents of neighbourhood boards for example who don't receive any wages and they organise with their neighbours.

Me: and how do these people make a living?

SISS Manager: They are housewives. They might have a part time job. Many people do it and this is why it's so admirable because these people do it for a service to their community, it's full of them. Go to a neighbour's organisation, do you think those folks get paid a salary? That is why I admire them, because the guys work for the community, which is what we all want, to help our neighbour, to help the guy with a problem. At least I want to build that, I don't want a society where everything is individualistic and where each one keeps to their own. No, these people are admirable, and this is why the APRs have survived for so long, because people themselves are at the forefront.

I could not help but wonder whether he would be willing to work for free or perhaps whether he would dare asking AdV to work for free. Would AdV or any multinational sanitary company be willing to give water to the APRs who need water rights, instead of selling them? Why is it OK in his view, to ask ordinary citizens and people living in rural villages to work for free, but it is inconceivable to ask a multinational company to share their profits with the most vulnerable?

Sitting in this man's office, drinking a coffee served by his secretary and in the comfort of a room with air conditioning, I realised Chile is a country where different worlds coexist. From the comfort of his office and salary, the SISS Audits Manager is far from accepting the knowledge Ignacia has gained from her own experiences of how the institution works. There is the world of the rich and lucky, and the world of the poor and unlucky but also a place in the middle where the community values the Law on RSS refers to are constantly challenged. For instance, I see this in María's account at the CORE meeting where she revealed the difficulties she faced when trying

to access private lands. This was an issue also present at Algarrobo-Viejo as some Committee members would try to negotiate with the APR manager a free membership or a free water meter in exchange for access to an APR installation in their land. A similar thought about a lack of solidarity between these different “worlds” crossed my mind after talking to the Councillor Ignacia recommended me to contact. I asked him about the needs for the APR sector and his views on this programme to what he replied:

The problem with APRs is that they run out of capacity because there is a sale of “witch plots” where some people sell patches of land to other people. When the buyers realise those lands have no water connections, they go to the municipality the wretches, demanding for water. The poor municipalities *with their own resources* have to buy water tankers to deliver water to these people. These people put pressure on the authorities, they throw stones, they are proper chavs *who think they have rights*. I have been to the meetings, they are savages, like painted-face Indians with feathers. One cannot understand why they complaint! (Interview with CORE Councillor, Santiago).

I knew Municipalities did not pay for water tankers with their own resources but with resources from the ONEMI and distributed for emergencies with approval from the Ministry for Internal Affairs. As I listened to his personal views, I realised there is no regulation preventing the selling of “witch plots” and that people falling into these scams are unprotected and even blamed. The experiences this man was criticising were like the experiences of Juan, José and Fito. The knowledge he had of these ‘wretches’ is in stark contrast to mine. I did not see ‘savages with feathers’ throwing stones to Municipalities. I saw hard-working honest people who had retired to the countryside and who were doing everything in their power to access a basic human right. I wondered whether this councillor had ever met someone like Juan or whether perhaps he has only heard sensationalist horror stories about people in a desperate situation. I could see a great difference between his account of the situation and my knowledge of the standpoint informants’ experiences as they themselves explained them to me. These interview excerpts also revealed the concealed racism within the institution where ‘indians with feathers’ and ‘throwing stones-chavs’ are descriptions of people like Juan requesting access to the human right to water because

‘they think they have rights’. Although my claims about institutional racism do not explain how things work to exclude people from accessing drinking water I am showing how this councillor, despite his ignorance about the personal experiences people have to deal with in their quest for water, has the power to intervene dramatically in their lives.

I noticed tensions in several of the interviews I had with participants in the extra-local setting. As they blamed the inefficient work of the APRs on the unpreparedness of the people running them, I took the side of standpoint informants and APRs workers. This was not only obvious in my interview with men at the SISS or at the GORE as shown above, but also in an extended conversation with people from the APR Programme at the DOH in Santiago and who supported the Law on RSS and worked together with the *dirigentes* on its crafting. These are the people who know the *dirigentes* more than anyone else in the government apparatus. However, they were defensive when I asked why *dirigentes* did not have a salary:

Official: Those social leaders who complaint is because they want a salary. But this partnership, the public-community model, has been successful so far. Now that their territories will be protected [from private sanitary companies] this model will be maintained. If we paid all *dirigentes* a salary, how do we make sure they do their work? with what structure do we as State, do that? We would have to hire inspectors to oversee they meet their responsibilities. And suppose the State took responsibility of rural drinking water provision, how many employees would we need distributed across Chile? And how do I control them so that they operate and manage the system, control the water quality, pay electricity bills, pay salaries, issue fines, attend the public, etc?

Me: Maybe that is why people in the APR felt APRs were a “*cacho*” for the government

Official: That is not true, we do take responsibility for this. The State makes an infrastructure investment in places where people have no access to water, and this is at zero cost for them as all the investment is made by the State. It is a direct subsidy to people. They do not pay in their tariff for the recovery of that investment. We could have said "you know what, instead of being here we will relocate you there and that way we save ourselves all the money from building this infrastructure. But no, they are already there, they want infrastructure, and the State asks them

to organise a committee for them to manage, operate, and maintain the system. That is their contribution, and the State contributes with the infrastructure. Moreover, the State makes a commitment to them, to do the follow up, supervise, and advise them so that they do it well. So, it's not a "*cacho*".

In the view of these public employees whose work should serve Chilean citizens as a whole, there is a radical difference between rural and urban citizens which is what Juan reveals when he says, '...is this what I have to hear as a citizen of this country?'. The excerpts analysed above show that there are different hierarchies of citizens depending on which of the countries within Chile they live in. Although these government employees at the APR Programme in Santiago have good intentions and work with the APRs and understand their concerns and hard work, they are still embedded within the wider organisation of drinking water in Chile. These employees are aware of the situation in which APRs are inserted in, the Chilean countryside where the model of patronage and *latifundios* was an important form of control and which is still reproduced today:

The model that they [APR *dirigentes*] have of hierarchy and how to be a boss is the model of patriarchy and the patronage of the Chilean countryside. They don't know another type of leadership; they don't know how to be a team player or share responsibilities. Because those are the models that Chile still has in rural sectors. There are other rural sectors more open and permeable to change with more access to information and with younger managers, so there is a whole range (Interview with Leader of Community Development, APR programme, Santiago).

The history of neglect of the rural countryside in Chile since colonial times is relevant as that neglect was increased and deepened with the installation of the republic. Despite of the influence of historical processes, the APR Programme Director seems to think that some people are born leaders even when they might not have received any training:

We have 9,000 leaders in the country and the level of education varies greatly. There are leaders who are engineers, lawyers, doctors, and others who with luck have completed Year 2 at school, and that makes a big difference. The person who is a leader and has no training knows how to

manage their workers and delegates tasks. Others don't, others take over the process (APR programme Director, Santiago).

This is a contradictory excerpt as it is implying education levels are important, while at the same time some people are innate leaders and others are not willing to delegate tasks and take over the process. Once again, the responsibility of the work of APRs is on people themselves and not on the institutions they are up against.

Going back to the CORE's meeting, I realised COREs approval is crucial in the actual implementation of projects. Moreover, the example cited by the Mayor of Curacaví resembles the situation at Algarrobo-Viejo where the APR is constantly in need of new projects. As I heard in numerous occasions, I&E projects run short before stipulated as there are always more people in need for water. The rules specified in the RIS indicate projects have a lifespan of 20 years, when in reality they run short in 10. Susana explained that all feasibility forms filled in at Algarrobo-Viejo are being rejected by the DOH as there is no capacity in the system for connecting new people. These new neighbours who are waiting for water will have to approach the APR every 6 months to renew their request for water until a new I&E project comes up, which could take between 5 and 8 years, as long as they visit the office every 6 months. The Committee at some point will contact the DOH so that they implement a new I&E project as the population requesting water grows and the investment is justified. This is like what Señora María and other *dirigentes* do. They constantly voice their needs and concerns, requesting support from the "authorities", attending meetings, lobbying, etc. Regional employees from the DOH can also attend these commissions, give a presentation of the projects which have already obtained an RS and ask councillors to "prioritise" them. However, getting an RS does not always imply the project will get the funds it needs as María's statements show.

I asked Pamela at the DOH in Coquimbo to explain why is it that the final decision rests with the COREs even after having gone through an economic and technical method for assessment as the

one conducted in MIDESO. Why is it that the decision-making power is left in the hands of politicians?

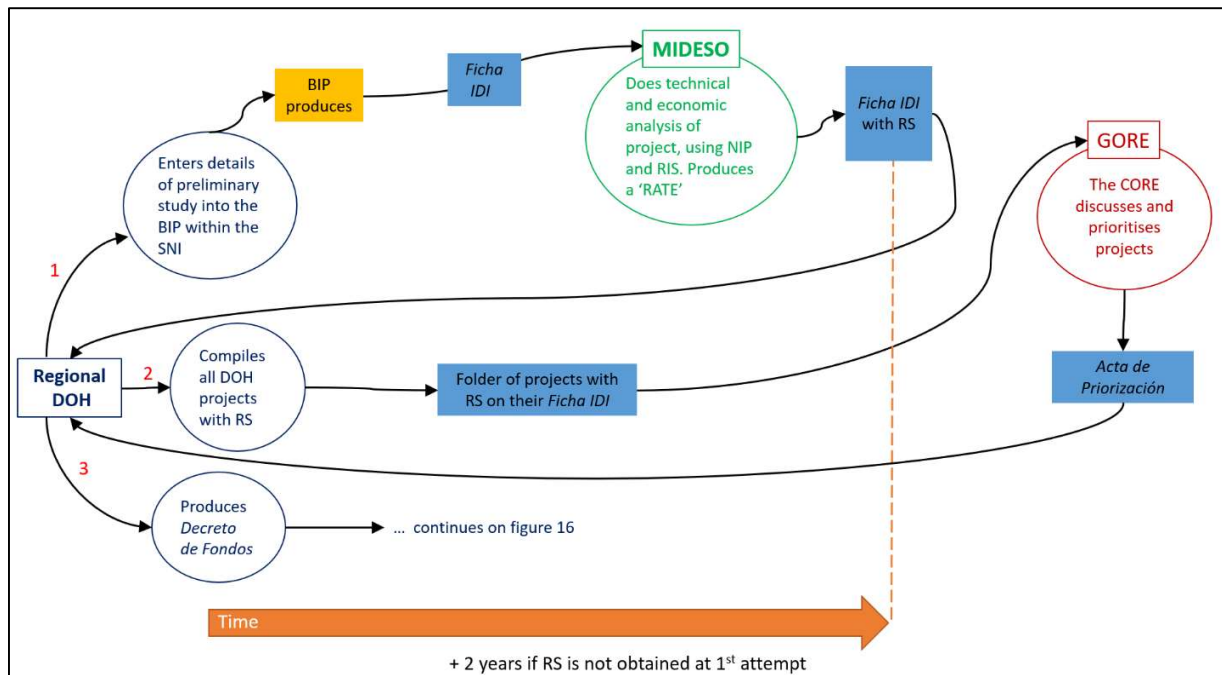
Pamela: This responds to a State structure, so you could ask the Presidency of the Republic why the State investment must go through the CORE. For us it's a requirement, so we don't ask ourselves "what is the meaning behind this". We know that's the way it works and obviously we [DOH] work to achieve our investment initiatives for each year (Interview with Pamela, Regional DOH).

When I asked her whether the COREs have a list of priorities to know which projects are more important or more desirable than others, she said they do not. I sent several emails and used the government's "lobby platform"¹⁴⁶ by which any citizen can ask for an interview with public servants and where a reply must be issued within 3 days. I wanted to arrange a meeting with someone from Treasury or from the Presidency, but I did not get any replies. This was surprising as all the other interviews I got with government officials were through this platform.

The process described until now is illustrated in figure 15 where three courses of action stem from the work of DOH regional employees. The first course of action links the work at the DOH with the work of MIDESO, through the Ficha IDI. The second course of action links the work of the DOH to the work done at the CORE which results in the production of an *Acta de Priorización*. The third course of action is the production of a *Decreto de Fondos* (Fund Decree) which is then sent to *Tesorería* (Treasury) as shown in number 3 below. It is important to note that this process was completed in more than 2 years, as Pamela explained.

¹⁴⁶ The lobby platform came as a result of the publication of Law 20,730 which regulates lobby and activities that represent particular interests before authorities and public employees (MINSEGPRES, 2014).

Figure 15: Courses of action stemming from work done at the regional DOH



Source: Author

Back at the DOH

Once a project has been accepted at the CORE it gets listed on the *Acta de Priorización*, which is then sent to the regional DOH where a *Decreto de Fondos* is produced. This process can take between 2 to 3 months. That *Decreto* includes the *Ficha IDI* from MIDESO stating the project has got an RS and also contains the *Acta de Priorización* from the CORE. This institutional text goes to the *Dirección de Presupuesto* (DIPRES)¹⁴⁷, a department within *Tesorería*. In this department a number is assigned to the Decree and employees review it and send it to the *Contraloría*¹⁴⁸.

¹⁴⁷ Budget Directorate.

¹⁴⁸ The *Contraloría General de Chile* (General Accounting Office) is a constitutionally autonomous body in charge of legal aspects, management, pre and post-audit of all the activities of the civil service. The *Contraloría* serves as the government's auditor, it approves or rejects revenue and investment accounts of public funds and scrutinizes the collection and expenditure of government funds undertaken by Treasury, municipalities, and other state services.

Within the *Contraloría*, a process called “*toma de razón*” is undertaken¹⁴⁹. This is an ex-ante review where the *Contraloría* scrutinises on constitutional and legal grounds, executive decisions and regulations before they are officially published. This procedure may represent an effective veto point in the administrative process. Only after the *toma de razón* process is completed, *Tesorería* can release the funds and assign them to the DOH as indicated on the Annual Budget Law. I tried to understand what the *toma de razón* process involved as it seemed to be an important step, especially considering the *Contraloría* has veto powers on administrative procedures. None of the public employees, politicians, or social leaders I interviewed were able to explain what this entailed. As mentioned earlier, I was not able to secure an interview with anyone at either *Tesorería* or *Contraloría*. However, and until this stage there are risks in the process and the Decree can still “fall through” as this excerpt from an interview at MIDESO shows:

The DOH sends a lot of projects to us under a unique decree at the beginning of the year: a “decree identifier”, which is like a projects package. If one project within that decree is rejected by the *Contraloría* then the whole decree falls through. This is what the new ‘State modernisation’ plan attempts to change to make things more efficient. Everything would be done online and by project instead of by packages of projects. The *Contraloría* is the last filter and something can always go wrong with the revision of administrative acts (Interview with Investments Department Officer, MIDESO Santiago).

This is a heavily textually mediated process as figure 16 shows. Only once the *Decreto de Fondos* has been authorised by *Contraloría* (course of action 3), released by DIPRES, and received by the DOH can the DOH call for a public tender process to select the company implementing the project. In the case of the I&E project in Algarrobo-Viejo these funds come from the DOH so the call for a tender process and the selection of a commissioner for the implementation of the project (numbers 5 and 6) are outsourced and undertaken by AdV. The tender is a public process in which the project technical description can be purchased by companies (such as OP) who wish

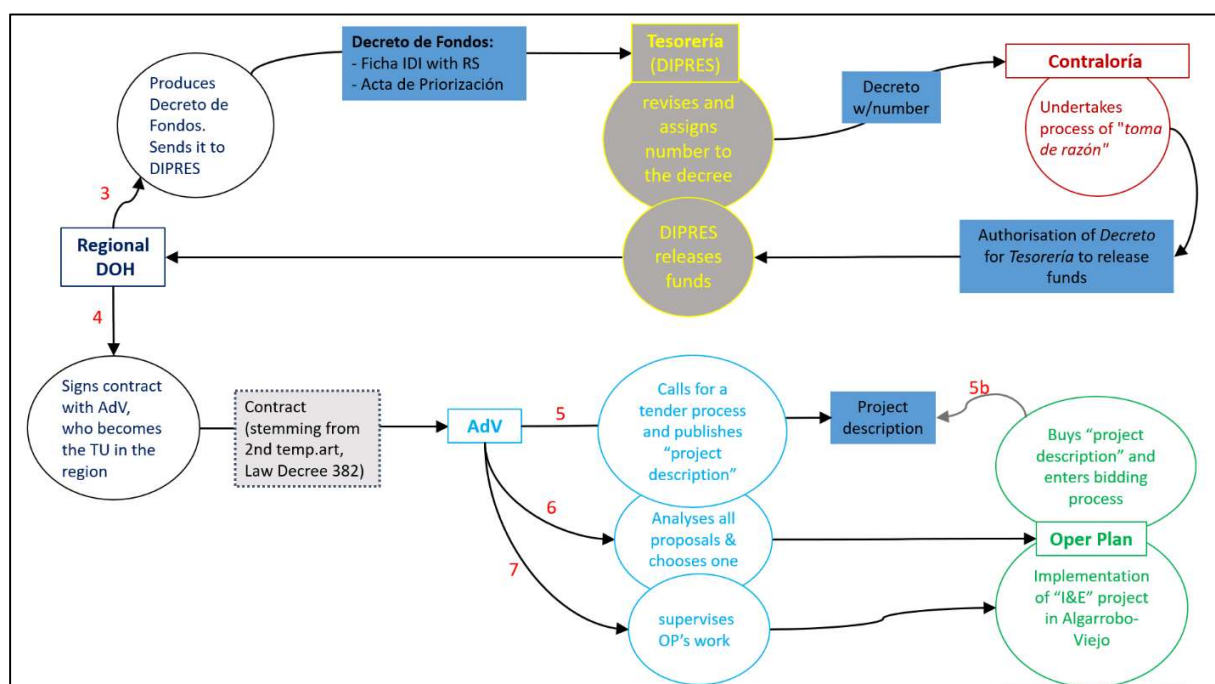
¹⁴⁹ Another legal control function of this office is the power to issue legally binding opinions on issues concerning laws that govern administrative bodies and procedures.

to be considered in the tender process. However, when a project's funds come from the FNDR, the DOH calls for bids without the intervention of the TUs.

Back to the local setting

The role of AdV as seen in figure 16 stems from course of action 4 which represents the contract the regional DOH signed with AdV and by which the DOH outsources technical advice and guidance to APRs (explained in Chapter 3, figure 6).

Figure 16: Courses of actions stemming from work done at regional DOH



Source: Author

Through this contract, the sanitary company becomes the TU in the region. It is the last courses of action from number 4 onwards, that caused several problems and concerns for the members of Algarrobo-Viejo and for the APR staff. These concerns prompt the *dirigentes* and manager of Algarrobo-Viejo to go directly to the DOH to complaint, as in their view the work of both Oper

Plant and AdV is negligent. The following conversation between Ana and Elías shows Ana's frustration with the work of OP and with the ineffective supervision of AdV:

Ana: Now we're worse than before, because what these men did was a solution by 'patches', especially when the soft starter¹⁵⁰ burned out. We use DC 220 here, but the soft starter needs less voltage. OP's electrician came and installed it anyways, without checking. Our operators ended up working till the early hours trying to solve the problem. We were left all day without water, people were furious. I turned off the phone because people ask for explanations and I don't know what to tell them

Elías: This man is saying that they are now installing a solenoid¹⁵¹, and in relation to the soft starter, he says they [Oper Plant] will assume the cost. They ordered a new one on Thursday.

Ana: If they ordered it on Thursday it should have already arrived! It's Monday now, and it's a bank holiday on Wednesday. Can you imagine the mess?

Elías: I'm not defending them Señora Ana, but that would depend on the availability of these items in the market, there is not much for them to do. We should keep this in mind in the future. Especially during summer when water is most needed.

Ana: Well, there is nothing for us to do now other than wait and keep on waiting. Tomorrow I will connect everyone to the pipe, no matter what! People can't keep waiting for water. There is a lady who wanted to get connected to the main pipe, but Don Martín told her there was very little pressure, so she prefers to keep on using the water tanker instead!

The views about AdV and OP's lack of professionalism are shared by Hugo, the APR Programme Director of Coquimbo who thinks sanitary companies have no interest in doing their job well:

Hugo: We think their service is appalling, we are unhappy with their work, they are deficient in everything they do [...]. If they work badly and make mistakes and I don't check whether they implemented the solution well then I get in trouble with people, with the governor, with the media and politicians who love all the drama. If these people were here in the office, I could ask

¹⁵⁰ A soft starter is a device that protects electric engines from damage caused by irregular power influxes.

¹⁵¹ Generic term for a coil of wire used as an electromagnet. It also refers to any device that converts electrical energy to mechanical energy.

them: “did you fix this problem, did you check the systems are working?” I can ask them to follow things up [...] working with them [AdV] is complicated because we respond to very different commitments. I have administrative responsibilities because I’m a public servant, but a private company [...] has no responsibility towards people. I am passing on to them a role that corresponds to the State, but they have no administrative responsibility. If I make a mistake, the law applies to me as I’m responsible for every signature I make and every job the TU does for me. When the Law on RSS is fully operative, I will have more public employees who I’ll need to assess in their degree of commitment with the service as they will have the same responsibilities I have. We have to assess them in terms of their vocation towards this service, because If I have no vocation, I shouldn't be here. I can’t come to work and say I’m fed up with people, I’m fed up with the APRs. As a public servant, I need to be patient and listen to people with their complaints and queries, including yourself, because that is my job. But I don’t think the CEO of AdV cares about vocation or has a will to serve the people [...] Another thing has to do with the salaries. I came into the public service and I know how much I will earn because the State is my employer and it can’t pay me less than what is established, I don't have to negotiate my salary. Whereas for example, we give the private sanitary company \$100 for a job and they pay \$2 to the professional they hire, but then they actually give them \$1, and make a profit with the rest. This means the quality of the professionals they hire is lower, but I can’t interfere with the way a private company works. (Interview with APR Programme Director, Coquimbo).

When I asked him why the DOH must have these intermediaries and has outsourced a job they should be doing themselves, he replied:

Because the APR programme has no law dictating how it should operate, there is no regulation for investments. We need to look for ways in which to fund our projects because nothing is regulated. The Budget Law says monies for investment will go to the DOH. But, because we as a programme have no regulation, the DOH has no personnel to implement the APR programme. The only way is for the DOH to consider external technical assistance. The funds the DOH has are for investment, so the only choice is for the DOH to call for a public tender process for technical assistant which can only be done by sanitary companies, according to the Budget Law [...] However, private sanitary companies are basically one per region, so it's a monopoly. With the

new Law on RSS there won't be external technical assistance anymore. The DOH itself will have to deliver that assistance as long as the State hires the professionals needed and provides the resources. The law has incorporated hiring more people, which is definitely something we'll need in order to implement all these new functions (Interview with APR Programme Director, Coquimbo).

This interview excerpt explains the contract signed between the regional DOH and the sanitary company is something Law on RSS seeks to tackle directly. The main objective of Law on RSS is to devolve technical responsibilities sanitary companies currently undertake to the DOH. The aim of the national *dirigentes* when creating the Federation was precisely to eliminate this relation between the DOH and Adv as they saw this outsourcing as a waste of State resources.

I have included a map of the textually mediated processes stemming from Arrayán's need for water. In figure 17, we can see the new Law on RSS (faded blue box) below 2nd temporary article from Law Decree N°382, a law that has not yet entered into force. Although in less detail than previous figures, figure 17 shows a general map of the ruling relations organising the work of people situated in different settings, coordinating their efforts and activities through institutional texts. This map does not include the work processes involved in each one of these settings, however I have explained them in detailed in this Chapter and will review them again in Chapter 9 when analysing the discourse on "community water management".

The yellow arrows represent the direction of texts that leave the APR, are sent to the DOH and, are then sent back to the APR (rejected feasibility form). The green arrows represent those text-mediated processes that happen at the regional level between the DOH, GORE and MIDESO. The red arrows represent text-mediated processes related to the release of funds, a process that happens at the national level and which involves the work of *Tesorería* and *Contraloría*.

The person in the bottom left-hand corner represents Juan and the people from Arrayán. Adv and OP are related through 2nd temporary article from Law Decree N°382 which indicates Adv as the TU that supervises the tender process once the funds are released. Adv has a double

presence in the local setting as they also sell water to the APR through a “52b Contract”. Behind “52b Contract” is the Water Code as a boss text regulating and organising the water market by which AdV can sell water rights to the Committee.

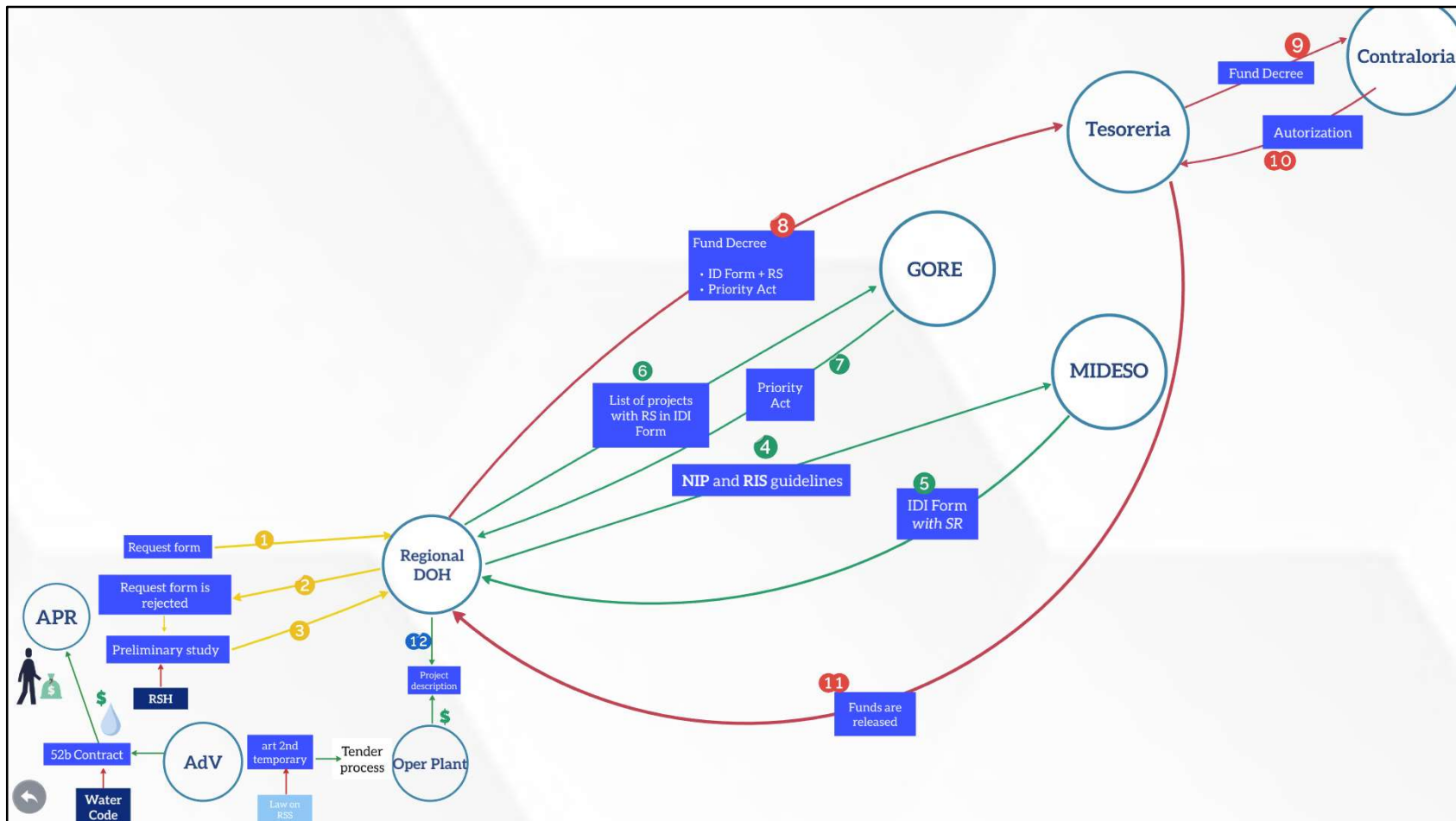
Behind the preliminary study we can see the RSH, which is the reason why people from Arrayán need to fund the engineering study. Both the RSH and the Water Code are at odds with Juan’s experiences and are where his frustrations stem from and which I have identified as the two disjunctures in this research. The second of these disjunctures, which relates to the RSH as a boss text, will be explained in the following Chapter.

In hindsight, I have come to realise that had I been determined to look only at the participatory aspects and negotiation of this Law I may have missed all the other aspects here illustrated. Moreover, the Law may not come into force in the near future and my analysis would have not been as helpful to the people in the local setting.

Chapter 7 has reviewed in detail the work processes involved at different scales of government in the funding and implementation of the I&E project producing a map of the ruling relations of community water management as experienced in the local setting. This project was the cause of the PAC event and the reason of several dissatisfactions and frustrations for the community of Algarrobo-Viejo.

In the next chapter, I will return to the experiences of standpoint informants this time to look in detail at the second disjuncture that will help me understand how people’s experiences were organised by processes created somewhere else and by other people and which are not entirely visible in the local setting. This second disjuncture is located around the mandate for people from Arrayán to pay for a part (6%) of the I&E project in addition to their need to fund the preliminary study. Chapter 8 takes a close look at the RSH as a boss text with important implications for the daily lives of people located in the standpoint. This analysis will reveal a few avenues for change.

Figure 17: The textually mediated I&E project



Source: Author

Chapter 8: 'We had to pay for this investment, and I don't understand why'

What emerged as a problematic in this research is that multinational sanitary companies profit through a form of water delivery in intensively developed urban organisations that can be shown to work in efficient ways. In rural areas however, State responsibilities rely on the work of voluntary workers liaising, lobbying, and fighting to secure funds to build or improve water systems in their communities. The problematic I described in Chapter 6 relates to how differential access to drinking water and sanitation in rural areas is organised to happen in the way it did for Juan. This problematic has directed my 'attention to a possible set of questions that may not have been posed or a set of puzzles that do not yet exist in the form of puzzles but are "latent" in the actualities of the experienced world' (Smith, 1987, p. 91). Standpoint informants and people in the local setting pointed to a larger picture, an organisation I am discovering and sharing with the reader step-by-step.

Here thus, I return to the empirical manifestation of issues happening for standpoint informants, which together with the discoveries made in the extra-local world will provide more insights into the organisation of the institution under scrutiny. This Chapter describes Juan's second disjuncture which relates to the *Registro Social de Hogares*¹⁵² (RSH) and the ways in which this text works as an ideological code, constructs "vulnerability", and classifies households and people.

Constructing "vulnerability"

Standpoint informants have had to invest an important amount of resources and effort to extend the APR's infrastructure to their houses in order to get access to water. The first disjuncture expressed by standpoint informants was explored in Chapter 5 and relates to the construction of

¹⁵² Social Homes Record.

“water rights”. The second disjuncture analysed here can be recognised in the following excerpt from the interview I had with Juan:

Juan: Here you cannot question anything. First of all, the water is managed by AdV. They should have coverage for all of us, or the State should ask them to extend their pipes to reach everyone’s house. *We had to pay for this investment, and this is what I don't understand. Why?* (emphasis mine). I mean, I understand the position of AdV and of all the companies working on public services, they will not install water to Juan because to extend those pipes up to here will cost them like 20 million and Juan will only pay \$12,000 pesos so not even in 20 years they’ll get their money back. But, *is this what I have to hear as a citizen* of this country? (Interview with Juan, Standpoint informant).

The phrases I have highlighted from this excerpt have guided my analysis especially in relation to what texts to follow when stepping into the extra-local setting and who to interview next. The words emphasised guided my exploration into the organisation of water Juan is referring to. This is a disjuncture about the subjective knowledge Juan indicates as a right of a citizen to have water pipes built into his house, either by the State or by a private company, so that he can get drinking water. This is not a question of whether Juan will pay or not for his water bill, but it is a question about the conditions for that to happen. It is prior to the paying of a bill and it is what Juan expects the State to do for him as a citizen. This points at an organisation of drinking water delivery in rural areas that he does not understand, and which is at odds with his experience so far of accessing water. The frustration Juan indicates is also revealed in the following excerpt which exposes the fact that laws change over time and that people need to keep up with them to know what to expect. Moreover, he perceives there is an assumption from the “authorities” about the amount of resources people may have if they own some land:

Juan: The APR Committee here is very closed, and you need to become a member by paying US\$1,055. Also, this area is supposed to be rural but just the other day I got a bill for council tax, which is only paid in cities. I don't understand anymore, these must be new laws. That might be why people are selling their patches of land because it's become expensive to have them if you

don't exploit them. They assume you are a great *hacendado*¹⁵³ but some of us only have 1 or 2 hectares.

Juan's experiential knowledge is informed by his views about a professional knowledge and an economic system that is at odds with his experience. That professional knowledge extends beyond the text and work practices people from Arrayán and APR staff engage with. That official knowledge responds to an ideology dominated by conceptual models of "water rights", "water markets", "vulnerability", "socio-economic evaluations", and "efficiency" of projects that use very specific economic tools to assess project's profitability and people's vulnerabilities.

I will look at the instruments revealing the professional knowledge within the DOH, SISS, and MIDESO regarding the questions raised by Juan above. This analysis is, however, not an analysis of the documents per se, but one of the social relations in which texts are embedded and which includes people's participation and work.

The explanations I received in the extra-local setting when asking why Juan needed to pay for part of the investment reflect similarities in that they place faith in the RSH as a tool for classifying people. For example, the DOH regional Director for Coquimbo says:

Hugo: APRs have a social aim and thus we need to cut off people with no vulnerability, some agree and some don't. For example, if we assume water to be a human right, then it wouldn't matter whether a person is vulnerable or not, even more so if they are going to pay for their water service. In sanitary companies' concession areas [urban areas] the State owns all the infrastructure. But the State has never asked people living in cities whether they are vulnerable or not in order to supply them with water.

This is an interesting excerpt which explains in part why people from Arrayán had to contribute with the preliminary study, however it also reveals the logic behind this decision which is not considering water as a human right. The logic at work is that APRs have a social aim which

¹⁵³ *Hacendado* is a synonym for *latifundista*, a person who owns large amounts of land.

translates into the idea that only those who are “vulnerable” will be benefitted with water. There are different understandings about what the “human right to water” actually means, and on the State’s responsibility in providing the means for its accomplishment. Both “vulnerable” and “non-vulnerable” peoples are paying for their water bills which cover the delivery costs. Only some rural people, however, are asked to contribute with the investment of the project, whereas nobody living in urban areas is requested to do this. This relates to the idea discussed in Chapter 7 about the existence of many countries within the same country where things in rural and urban areas work in very different ways.

The discussion above implies that the instrument defining who is “vulnerable” is relevant in the decision-making process but only when it contemplates rural areas. Ultimately, the amount people in rural areas pay for water is higher than the amount people pay in urban ones. I found out at the PAC event and in conversations I had with the Committee’s members of staff that the reason for this is because the fixed costs are lower in urban centres which seems to defeat the purpose of the APR programme targeting “vulnerable” rural populations. I asked the Director of Social Investment and Assessment at MIDESO about the difference in price between urban and rural areas to what she replied:

Water production produces great economies of scale, which means a very high fixed cost. And the production cost is very low, so when these fixed costs are distributed among fewer people, the production cost turns out to be higher. It costs more to produce water in rural areas as APRs are more expensive. It’s a less efficient way to produce water (Interview with Director of Social Investment and Assessment, MIDESO, Santiago).

I still needed to understand how the decision on how much ‘non-vulnerable’ people needed to contribute with was made. I talked to Pamela at the Regional DOH office and she explained that because it may take between 2 to 3 years for funds to be allocated the APR programme has allowed Committees to make their own contributions to water projects following the DOH and MIDESO’s technical guidelines. According to Pamela, ‘private contributions speed up the

process'. However, this was not what I was told by people at the local setting as they claim it took more than 5 years for the project to be implemented and for people to get water. To this, Pamela replied:

The public investment process is complex and very responsible and that is why it has deadlines that are not necessarily understood by the community. The designs are often easy to do in terms of its engineering [...] but they also need land permits, easements and sanitation, and in the case of Algarrobo-Viejo they also needed an approved 52 b which means they have an authorised water source. The community is often not interested in learning or don't know, and don't want to know! The only thing they understand is that they voiced a need once in a meeting and that it took 4 years for the project to get implemented. They don't understand the complex processes involved here. People talk about "bureaucracy", well if bureaucracy means it is slow and complex, then it is bureaucratic (Interview with Pamela, Regional DOH).

Pamela is explaining to me how things work in an inevitably bureaucratic process where there seems to be nothing she or anyone else can do to make it better or different. Moreover, rural people do not understand the process nor the mechanisms involved, and that is why they end up complaining. The problem in Pamela's view, are rural people and their lack of understanding and acceptance of how things work in relation to water access and delivery. The problem is not with the way things are organised to prevent them from accessing water but it seems to be located in people's attitudes towards this organisation.

I asked Pamela whether there is a criterion in place for deciding how much "non-vulnerable" people will be asked to contribute with. She replied:

there is no normative criterion. However, we [Coquimbo region] as forerunners on this, told MIDESO there were people here who were not vulnerable, and they asked, "how will these people contribute to the project?" It is a requirement of MIDESO, because the aim of the APR programme is to take responsibility for the vulnerable population in need of water. But in the face of the lack

of definitions regarding the criterion, the logic we adopted was that the non-vulnerable people needed to pay for their *arranque* (Interview with Pamela, Regional DOH).

In the case of the people from Arrayán I know that they had to contribute with much more than just the *arranque* which by the way is one of the most expensive in the country. They also contributed with the preliminary study which costed US\$ 20,750 and added US\$ 40,800 towards the project. I asked her again whether there is a criterion for this decision-making process, to what she replied that the contribution agreements are clearly established as to what the contribution is and why it is paid, and that this is not an arbitrary decision. When I visited MIDESO I asked whether there was a methodology to define the amount people are asked to contribute with in those cases where they are classified as “non-vulnerable”. This is what I was told:

There is no methodology to ask for contributions from families for APR investments. The decision to define a percentage of their contribution lies within the funding body. We only qualify the project as good or bad, convenient, or not. The subsidy the State usually gives until now is 100% of the investment, so if some people are asked to contribute, the methodology used to define how much they should contribute with should be based on the *Registro Social de Hogares* (Interview with Investments Department Officer, MIDESO Santiago).

In conclusion, I have found there is no agreed methodology to determine the contribution expected from people. The decision lies within the funding body and the people working there which may vary from region to region. There are obvious consequences stemming from this as people like Juan who would like an official explanation are left frustrated. What is relevant though from these interviews is the fact that the identification of “vulnerability” is a crucial step when assessing contributions towards the project. Therefore, I paid close attention to the RSH and the methodology guiding it. I will now turn to explain how the RSH connects with the standardised, quantifiable, and third-party verified “vulnerability” (or non-vulnerability) of people like Juan who need for drinking water in rural areas.

Registro Social de Hogares

I wanted to understand how this instrument was made, so when I visited the central offices of MIDESO I interviewed two experts on the RSH, both of whom are from the Division of Investments Social Assessment. They told me this instrument verifies how many people live in each household and how many of them contribute to the household income. The way this is done is by contrasting data declared by each household against administrative databases. I realised this is what Susana was referring to when she said: ‘they know immediately whether you have a car, a house, etc., because everything is online now’ (Chapter 6). The RSH is a social information database that includes all administrative records and information held by the State and it is used to determine the degree of vulnerability for each household.

We cross-reference databases to verify the data are indeed reliable and based on an order of income from the most vulnerable families to the least vulnerable we make groups of 10%. Those within the 40% are generally the ones who benefit from social programmes and subsidies [...] In terms of determining poverty at the level of the territory we use the CASEN¹⁵⁴ survey which doesn't allow us to know the situation of a specific home. Nonetheless, there is a coherence between them [CASEN and RSH] and there is a methodology that adjusts this percentage of vulnerability from the RSH with what the CASEN says (Interview with Investments Department officer, MIDESO).

A report about the RSH carried out by the World Bank and MIDESO explains this instrument modernises and replaces the previous FPS which for the first time introduced the concept of vulnerability (World Bank & MIDESO, 2018). The following figure shows the evolution of social protection programmes in Chile from the 1970s until now.

¹⁵⁴ *Encuesta Nacional de Caracterización Socioeconómica*, in English National Survey for Socioeconomic Characterisation.

Figure 18: Evolution of social protection programmes in Chile

	CAS 1 1979-1990	CAS 2 1991-2006	FICHA PROTECCIÓN SOCIAL 2007-2015	REGISTRO SOCIAL DE HOGARES 2016
Focus	Unsatisfied Basic Needs		Vulnerability - income generating capacity	Vulnerability - income inference
Grade format	Poverty index in 5 levels weighted variables	Revenue proxy - continuous score	Income generating capacity - continuous score	calculation of income and vulnerability assessment
Collection methods & information type	Interview in municipal office - self reported data - manual data management	Home visits - self-reported data - data in software - server in each Municipality	Home visits - self-reported data - verification of identification and pensions data - online platform - data exchange	Home visit & online updates - self-reported & administrative data (monthly update) - online platform - interoperability of data
responsible for collection & mantaining information	Municipalities			
responsible for administration, supervision & control	ODEPLAN - Oficina de Planificación Nacional	MIDEPLAN	MIDEPLAN	MIDEPLAN

Source: Adapted from World Bank and MIDESO (2018).

Before the FPS there were the CAS1 and CAS2 forms¹⁵⁵ which used the methodology of “unsatisfied basic needs” with emphasis on household income. All information collected was self-declared without verification. The FPS replaced the unsatisfied basic needs methodology by a focus on vulnerability based on the calculation of household “revenue generating capacity”. This means that people’s material conditions and their current income were not measured even though they were still recorded. Instead, emphasis was placed on people’s capacity to generate income considering their level of dependency, health, education, occupation, gender, ethnicity, geographic location, and household composition. ‘People not only wanted to be surveyed and

¹⁵⁵ *Caracterización Social*, in English Social Characterisation. This survey was created in 1979 when the Committees for Social Assistance were created as instances of communal level in charge of the execution of State social programs. The CAS1 form was replaced in 1987 by the CAS2 form, an instrument for socioeconomic stratification that used a mathematical model that resulted in scores, from a minimum of 350 to a maximum of 750.

registered in the system but they also wanted to reach scores that would allow them to access social benefits, which would incentivise households to distort the information they declared in order to reduce their FPS score' (World Bank & MIDESO, 2018, p. 27).

This last quote reveals the ideological discourse that an official government report produces about the use (and alleged abuse) people made of the benefit system. Moreover, this idea, supported by the weight of a powerful international institution such as the World Bank allows this discourse to be reproduced unquestionably like an ideological code in other levels of government such as the MIDESO and Municipalities. This ideological code is even reproduced by people working on benefit allocation as I was able to hear while doing fieldwork. Similar statements endorsing these ideas are found in the talk of the Director for Social Investment and Assessment at MIDESO:

I think this [RSH] is a good instrument. The fact that we are now cross-referencing several administrative databases is spectacular. That is, people can no longer lie. There is no such possibility because all the information is there. It is called Social Information Database. The CAS survey however was self-reporting so the information was biased but now with the RSH, all administrative databases are incorporated, just so that you can't lie. The basis of this system is information crossing to get as much information per household as we can. The database is so sensitive and so important, that for you to enter into the rooms where the computers with the information are, you need to go through iris control. (Interview with Director of Social Investment and Assessment, MIDESO)

Similar views are revealed when talking to the SISS Audits Manager:

Here in this country, we are used to subsidies. We give them everything. No way, we need to stop this. Give people workshops, training, knowledge, but don't give them money because that's killing them. People are used to this (Interview SISS Audits Manager, Santiago).

I was curious about the RSH as it seemed to be a comprehensive system for socioeconomic classification. According to information on MIDESO's website (MIDESO, 2019a), the RSH is built with data provided by the household and by administrative databases which come from: Internal Tax Services, the Service for Civil Registry and Identification, the Social Security Institute, Health Superintendence, the Unemployment Fund Administrator, and the Ministry of Education, among other sources. Within the set of information available in the RSH there is a *Caracterización Socioeconómica*¹⁵⁶ (CASEN) of the household which locates each household within an income and socioeconomic vulnerability section. The CASEN is based on the sum of the effective income of the people that make up the household for an average of 12 months, adjusted by the number of members, their age, and dependency degree (moderate or severe). In cases where household members do not present income information in the administrative bases owned by the State, the income values taken into consideration will be the ones reported by the member who makes the application to the RSH. The CASEN is constructed by supplementing income information with access to certain services that are deemed to be indicative of a high standard of living such as the total value of vehicles owned by the household members, the total value of the real estate owned, the value of the monthly payment of educational establishments, and the values of health contributions people negotiate with private health insurance companies (MIDESO, 2019a).

The interview excerpts included above show that the ideas presented in institutional documents about people trying to “cheat the system” are reproduced and feed back into the talk of several people involved in government work. Their understanding is that people abuse the system and that their first instinct is to lie. It is interesting to see how employees who are supposed to be working for people and in programmes which aims are to support the most vulnerable show more faith in the exclusionary mechanisms by which people can be refused government aid, rather than placing more emphasis on what people may need. I will explore this in more detail in the following section.

¹⁵⁶ Socioeconomic Rating.

The making of (non) vulnerable people

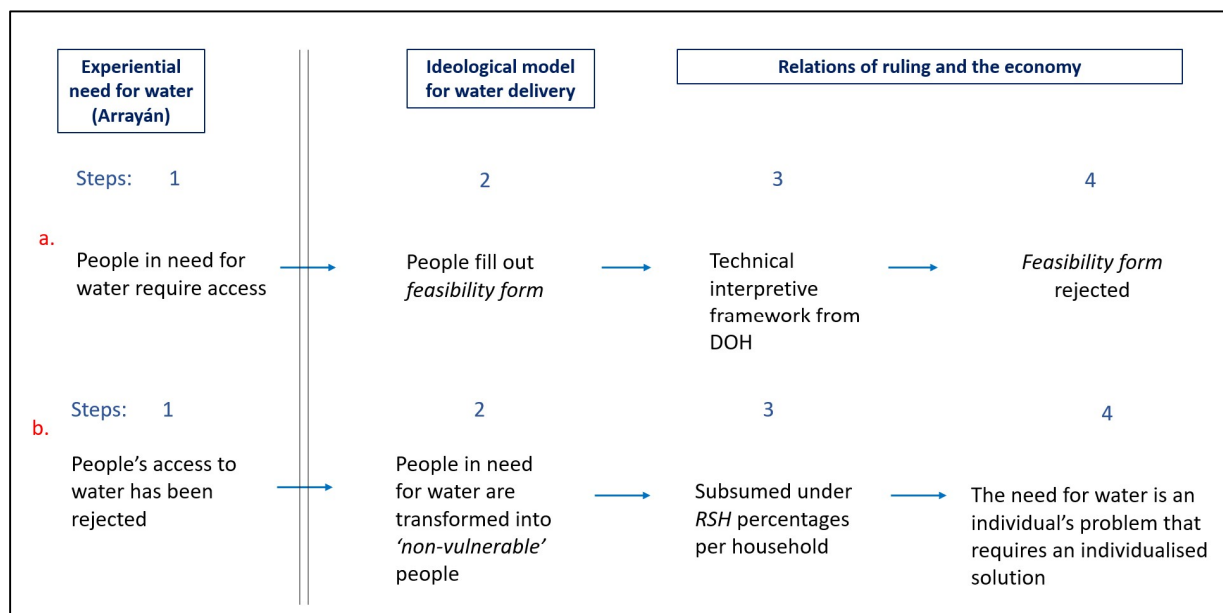
Although the RSH as a text is not directly activated by the people from Arrayán it does have important organisational consequences affecting people's lives. The IE concept of ideological circles is useful here as it 'locates sequences of text-coordinated action making people's actualities representable and hence actionable within the institutional frames that authorize institutional action' (Smith & Turner, 2014, p. 10). People's actualities are scrutinised to identify certain aspects that fit the governing frame or boss text. The textual representation resulting from this institutional work of matching and identifying can be interpreted in terms of that frame (Smith & Turner, 2014). The outcomes of this interpretation can lead to asking some people to contribute with a certain amount of resources as it was the case for people from Arrayán. In this case, the RSH is such a boss text. Its approach 'aims at allocating money transfers through the exclusion of higher income sectors where the State assumes responsibility for identifying and selecting beneficiaries and not the citizen' (World Bank & MIDESO, 2018, p. 10).

Thus, the RSH verdict intersects and works together with the feasibility form to determine an individualised solution for water requests. For example, when the feasibility form is rejected by the regional DOH and returned to the APR a decision is made in relation to the RSH by which people from Arrayán are requested to pay for the preliminary study and part of the project. Within this logic, the need for water which sparked the process in the first place, is turned into a ruling relation within a capitalist economy where water access is subject to payment. In addition, this payment is not only the payment of a water bill for the service (when this is delivered) but also of a percentage of the construction of the water system. Replacing experiential knowledge with an ideological one creates an ideological circle. It establishes the need for water as an individual problem that requires an individual solution.

In the first sequence of actions illustrated in figure 19, course of action (a) begins with the request for water followed by the activation of the feasibility form. However, access to water was rejected as there was no capacity in the system. This rejection forced people to continue buying water from water tankers or bottled water to the benefit of multinational water companies until

they decided to pay for the extension of the APR pipes (which also works to the benefit of a multinational water company: AdV). This forced requirement to invest is transformed into an acceptable way of dealing with “non-vulnerable” people in need of drinking water. The APR programme and its feasibility form make that decision accountable to the ruling relations of the economy through a higher order text materialised by the RSH. This higher order text determines an individual solution to the need for water subjecting access to drinking water to the ruling relations of the economy.

Figure 19: Construction of an ideological circle where the need for water is transformed into an individual problem



Source: Adapted from Deveau (2016, p. 325).

Still, it is important to contextualise these ideas as this understanding of people's needs does not only affect issues related to water access and delivery but also education, health, and pensions in Chile. For example, to choose the Chilean public health system called FONASA¹⁵⁷ people have to pay 7% per month of their taxable income which means Chile's public health system is not

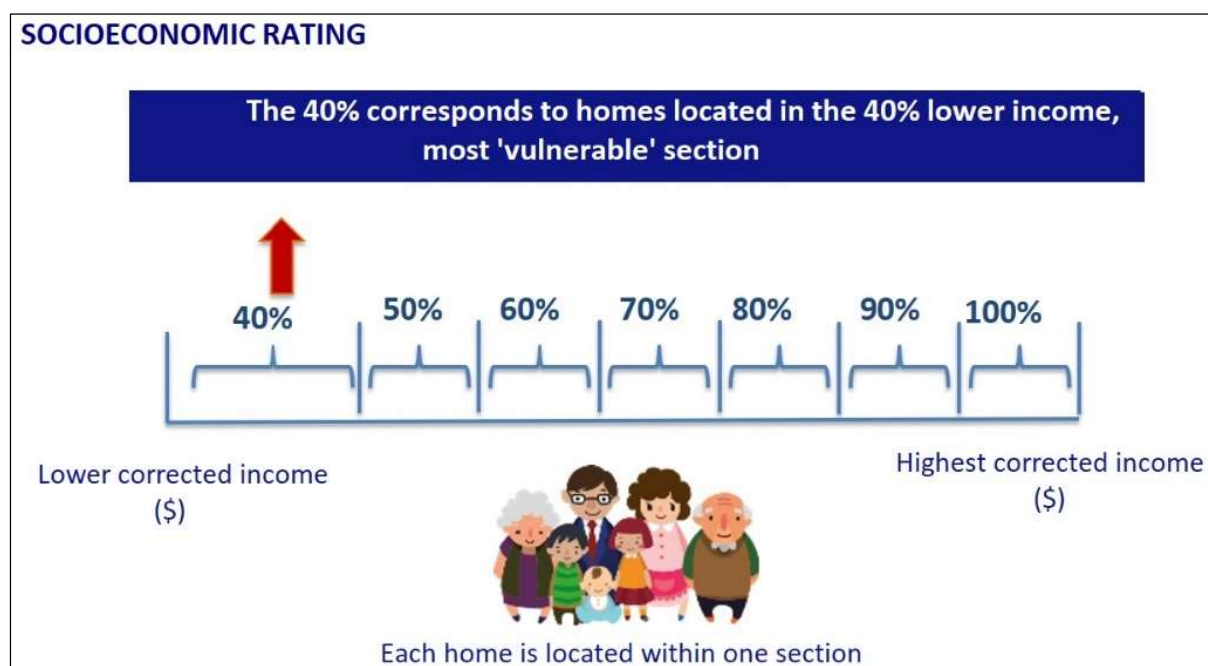
¹⁵⁷ *Fondo Nacional de Salud*, in English National Health Fund.

universal nor free. The people who get free access to FONASA are those without income. The other option is for people to go to the private sector which also costs 7% per month of taxable income, although people can upgrade their health plan if they want and can. People can also buy a FONASA insurance in case of catastrophic illnesses as not all illnesses are included for treatment in FONASA. In this regard, being affiliated with a health insurance company in Chile does not necessarily mean people are not vulnerable, as the RSH suggests.

With the implementation of the new system for measuring vulnerability the data contained in the FPS was merged with the previous data. The new database resulting from that blend was complemented with self-reported data on the RSH form in addition to the available administrative records contributed by different public institutions. This information allowed for an initial RSH database and for the identification of households with higher incomes to ensure benefits are delivered to those households in a “vulnerable” situation. Although this is an instrument that aims at benefiting vulnerable people, it is not built to identify those households most in need. Instead, these households are identified by default which might incur in mistakes as the instrument is built to exclude those who are less vulnerable.

The following figure shows how the division by ranges is done through the CASEN categorisation in which the stretch from 0-40% represents the lowest income and most vulnerable households. The last section, which stretches from 91% -100% groups households with higher incomes or lower socio-economic vulnerability (World Bank & MIDESO, 2018, p. 27).

Figure 20: Socioeconomic rating by sections



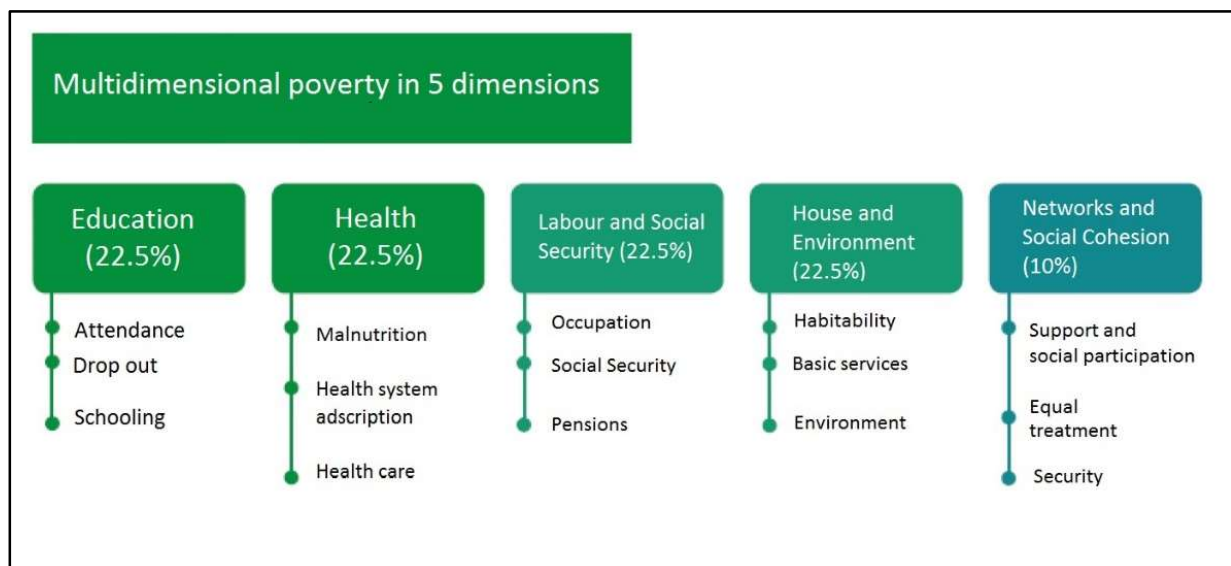
Source: Translated from MIDESO (2018b).

The definition of the number of sections and the fact that the first one is 40% is due to the need to make the cuts compatible with the requirements of the social programmes and benefits given the socioeconomic requirements of the population they target, with the characteristics of income distribution in Chile (World Bank & MIDESO, 2018, p. 100). Analyses done by MIDESO in the RSH design phase indicated that the natural first cut of income distribution occurs around 40%. In other words, it is not possible to distinguish households within the first 40% stretch without a high risk of making mistakes by using income information. The above implies that programmes with less coverage or which require sub-sections within the 40% should develop specific models considering variables that are more relevant and different from income, that account for the specific vulnerabilities each public programme addresses (World Bank & MIDESO, 2018, p. 27).

The measure of multidimensional poverty is based on the analysis of dimensions constituted by specific indicators. Minimum thresholds are defined for each of these indicators above which, it is considered that a person can have a decent life. In its first year which was 2014 (with

information from CASEN Survey 2013), the multidimensional poverty measure included 4 dimensions: Education, Health, Labour and Social Security and Housing, each one composed of 3 indicators, totalling 12 indicators. All indicators and dimensions had the same weight: the weighting of each individual indicator was 8.3% whereas each dimension had a 25% weighting. Based on the results of CASEN 2015 an expanded version was created by including a fifth dimension: Networks and Social Cohesion. Each of the dimensions includes the same number of indicators (i.e. 3) to maintain consistency with the previous measure and maintain the criteria of equal weight for each indicator inside each dimension. However, the dimension of Networks and Social Cohesion is incorporated with 10% of weight unlike the originals and ‘in order to favour the stability of the multidimensional poverty measure, as it would reduce the probability that households and people identified in this situation would no longer be considered in multidimensional poverty, as a result of the incorporation of new indicators. A household is considered to be in a situation of multidimensional poverty, if it is lacking in the equivalent of one of the four original dimensions of the measure’ (MIDESO, 2018a, pp. 11-12) as shown in Figure 21.

Figure 21: Multidimensional poverty measurement in Chile



Source: Adapted from MIDESO (2018a)

This analysis reveals that the speech genre represented by the RSH is a survey that produces a powerful textual reality taken as facts about people's living conditions, producing a legitimate representation of actuality that organises access to services such as water subsidies. The RSH is an authoritative text that produces a partial account. Regarded as neutral and objective, the RSH overrides unofficial accounts even those coming from those whose experiences are being translated into the textual reality constructed by the RSH. For example, the comment made by Fito about not being part of the poorest groups, but not being rich either shows a difference between the ways people are classified in the RSH and how they understand the conditions of their own life. The construction of the RSH is from the standpoint of State and World Bank experts and shapes the actualities of people who are recipients (or not) of State benefits. The decision on what variables to consider in the survey was not made with the input from all members of society, especially not those who consider themselves vulnerable. This partial understanding of the key variables in proving vulnerability leaves no space for dissent or feedback into that decision-making process. I will delve into these critiques in more detail in the next section.

Unofficial views on the RSH

Historically, *pobladores*¹⁵⁸ movements have been critical of socio-economic measurement systems and one of their great aspirations has been their elimination. Soto, the vice president of the National Federation of *Pobladores* said they are not satisfied with the changes made:

The Government emphasizes that the file is online and that all data will be taken from the State computer system. A house-to-house interviewer will no longer survey houses asking for the level of schooling or anything. This information will be provided by the Ministry of Education, or the Ministry of Labour or the Internal Revenue Service (SII), depending on the case. The problem is

¹⁵⁸ *Poblador* is a term that transcends its literal translation of 'inhabitant'. *Pobladores* have organised in social movements that have had social and political connotation. It is associated with those who fight for the rights of the poor majority living in urban areas (Mathivet & Pulgar, 2009).

these economic indicators do not reflect the social reality each family experiences (DiarioUCHile, 2016).

What Soto is revealing is that there are other factors that should be considered to reflect the conditions of people's lives and that this instrument is incomplete. For example, he explains there is a lack of inclusion of geography-sensitive criteria within this instrument which means that social benefits would have different yields depending on which part of the country people live in. Moreover, some say that the stratification of people by sections is done in such a way that delivers a 'benefit' for something that should be a 'right', in a model where people are seen as consumers. This is an interesting criticism as it is precisely related to the disjuncture Juan voiced which points to the privatisation of water. The NGOs America Solidaria and Hogar de Cristo mentioned the RSH should not be considered in absolute terms as otherwise particular characteristics on how people live and the conditions of their lives may be overlooked (DiarioUCHile, 2016). For example, a related critique is that the instrument does not consider the monetary expenses of those who are registered in the RSH.

The way boss texts such as the RSH are built and operate often aim at comparing what people have said about their conditions and possessions with what is available on State owned administrative databases. Such methods have an in-built bias towards detecting "lies" in the information people have reported about their economic situation across a set of abstract categories (Wagner, 2014). This implies a lack of trust in people and reveals expectations at play. While APRs and their social leaders are supposed to work for the love of their communities based on principles of 'mutual aid and community participation' (MOP, 2017, p. art. 16) the RSH does not respond to the same expectations.

The discourse about the usefulness of the RSH in the early identification of those abusing the system and its contribution to the work of decision-making organisms, reaches government officials in charge of applying this instrument on the ground. The following is an example of those moments when government employees place faith in the RSH, as mentioned in several occasions

by people located in the extra-local world. For example, the person in charge of rural water subsidies at the Municipality of La Serena said:

People provide information and the RSH researches what people say, contrasting that information with the information available online for that household. If in your house there are two cars under the name of your children, the system picks that up now. That information is something people used to leave out [...] Before this, there were lots of people who were taking advantage of the system (Interview with Water Subsidies Officer, Municipality of La Serena, Coquimbo).

Testing and comparing inconsistencies are ways to focus on certain aspects to the detriment of others. For example, as this is a household assessment and the unit of analysis is the “home”, this methodology may work to the detriment of women. Although it is known that in general and especially in developing countries women are poorer than men, this information is insufficient, because the data has mostly been collected at the household level with no details on intra-household resource distribution (Madeiros & Costa, 2006). The lack of attention to intra-household differentiations and context specific information leaves out aspects related to what each person in that house owns and uses to enhance their lives. For instance, there might be a car registered in a particular address, however it may not equally benefit all those residing in the house and not all of them may be able to drive it. Such conceptual approaches, definitions, and operationalisation of “vulnerability” into measurements do not connect with the real difficulties people living in vulnerable situations experience.

A deeper understanding of female poverty and the responsibilities and obligations undertaken by women (Chant, 2014) in Chile would include how women experience vulnerability. Government programmes such as the one studied here could be designed with a broader understanding of what occurs within the household level, which has consequences for the work mostly done by women at the community level. As Chant explains, ‘despite women’s increased contributions to household survival, there is little evidence of a corresponding rise in their personal rewards or entitlements’ (Chant, 2014, p. 6). This quote reminds me of the frustrations

Ignacia expressed when explaining she regretted having been a *dirigente*. Ignacia felt her work was not valued, she felt she lost 35 years of her life and that she would do something different if she could go back in time. But what option did she have? She explained she was able to do this because her husband supported her. This is similar to Mariana's experience, as she was able to be the APR President and not have a regular salary because she lived with her mother who supported her. This is the importance the State of Chile gives to rural drinking water delivery and in consequence, to people living in rural areas. Rural drinking water is a community service that is expected to be fulfilled through the work of mainly rural women, supported by their families.

The work of the RSH database and other texts end up being integral to a circuit which includes identifying "vulnerability" as a performance designed to conform to the methodology of the RSH. If people do not match the criterion they are considered "non-vulnerable" and not eligible for benefits nor even water delivery unless they pay and work for it. This is a methodology working strictly from the viewpoint of a deemed objective neutral place (that of the State) and clearly not from the viewpoint of the people this instrument is assessing. Moreover, the RSH does not organise the work of multinational water companies such as AdV; it only organises the lives of individuals. It is not the people's actual views or experiences of poverty that are taken into consideration, but rather the generalised results of the RSH which are taken as a proxy for that experience. This speaks of the organising power of textual realities and how the physical is overridden by the legal such as when the factual APR is overridden by the ideal APR existent only in institutional texts (MIDESO, 2015b). However, aspects that are not accounted for in the RSH measurements include the free labour of women working for the APRs and the activities they are not able to undertake because of this work. This neglect is in-built in the design of the RSH and in its unit of analysis: the household. This unit of analysis limits the understanding of people's differential experiences and income within the household. Also, what may be a necessity or a basic need in rural areas differs from urban areas which is what happens with access to drinking water and sanitation, pointing out to the relevance of context which is what the *pobladores* mentioned.

Additionally, there is no reference within the RSH on the water rights people may hold which could improve their income. For example, the selling of one share of water in the region of Copiapó would translate into a profit of 70 thousand dollars according to a water economist I interviewed in Santiago.

As several Institutional Ethnographers have highlighted, forms of textual mediation have become gradually computerised (Bisaillon & Rankin, 2013; Rankin, 2001; Wagner, 2014). The use of the Internet has allowed people's activities to be coordinated from one place to another via texts in processes that become faster and more easily accessible such as the administrative databases used by the RSH. People's activities and information are coordinated in increasingly specific ways. This coordination is more efficient with the advancement of technology and more 'continually invasive in the everyday world' (Wagner, 2014, p. 48). In fact, the RSH official document recognises that the technical and technological capacity available within the State, together with the collaboration of the United Nations Development Programme on the design of instruments and characterisation mechanisms were crucial to the development of this database. Moreover, the strengthening of information systems for updating, rectifying, and complementing the RSH's information was achieved with aid from the World Bank's Global Social Protection Practice (World Bank & MIDESO, 2018, p. 34).

In this sense, the RSH has increasingly replaced forms of communication that might have required face-to-face interactions through visits to people's houses to see their living conditions and complete a survey. This conversation now takes a textual form but is one way only. The person reads the information, fills the form out and sends it through the system and a mysterious database crosschecks all the information available about people's finances. Just like in a text-reader conversation people are agents for texts that are non-responsive, and which are used to make decisions that significantly affect their lives. The information attached to each person is then read by someone else (or perhaps not even a human being) located somewhere else and who interprets it following a specific frame and acts on it in the context of the RSH and its in-built biases and definition of vulnerability. The information about the score that each category gets

within the context and methodology of the RSH is, however, not publicly available and is not explained in any of the 112 pages of the official document. Ultimately, the official story about this instrument tells us that this model has been ‘praised internationally as an example of modernisation in the operation of records for benefit allocation, and has been presented at conferences on data integration for social protection in the US, Indonesia, Brazil, and Costa Rica’ (MIDESO, 2018b, p. 6). This is mirrored in the quotes of public employees who regard the RSH as ‘spectacular’ and an effective way to identify people trying to game the survey.

Implications of the RSH for people in the standpoint

Looking back at figure 13 takes us to the local setting and to the experiences of people from Arrayán. The magnifying glass zooms into the institutional mandate by which Juan, Fito, José and others are made responsible for funding the I&E project’s preliminary study. After reading the RSH official document, a power point presentation on it, and information available on MIDESO’s website, I am still unclear about how was it that Juan was categorised as a ‘non-vulnerable’ person or how the classification is actually done. To me, this continues to be a rather obscure process.

In Chile, studies on poverty have mostly been quantitative with very little qualitative research on what it is like to live in poverty based on the actual situated experiences of poor people themselves (Litvak-Cooper, 2018). As a result, policies are designed from a top-down perspective based on instruments also design in a top-down manner. The RSH is a restrictive textual representation of people’s actualities producing statistical facts that can be used to compare different groups of people and institutions. Moreover, its partiality is reflected in the absence of certain variables such as for example the work of *dirigentes* within the APRs. The RSH survey, available in Appendix Three, does not ask whether people live in rural or urban areas. The alternatives it gives for the module V.4 about the “source of water” in the house does not include the option of APR as a particular context where specific types of work need to be made in order to access water. The alternatives provided in this section are:

1. Public water network with own water meter
2. Public water network with shared water meter
3. Public water network without water meter
4. Superficial well or *noria*.
5. River, stream, or brook
6. Other sources (not drinking water)

Options 1, 2 and 3 relate to networks located in mostly urban areas where the infrastructure has been paid by the State and the delivery of drinking water is provided by a private sanitary company. Options 4, 5 and 6 relate to the source of the water resource itself and is not about the way in which the water is delivered to the house. This means there are no options here to tick the box if people's water is specifically managed by an APR and those people in that situation would have to tick one of the boxes in the first 3 sections even though their water provision is not through the work of a private sanitary company. In this sense, people are not considered as the real experts of their lived conditions nor as active service-users. Consequently, their knowledge has not been sufficiently addressed which may have damaging effects for social policies (Beresford, 2013).

Poverty is considered a controversial concept worldwide and some have argued for a more relative understanding of poverty, recognising unequal distribution of resources and looking at the environment where families are embedded with attention to specific territories as opposed to absolute definitions (Gordon et al., 2000). Recent definitions of poverty include cultural, social, and historical aspects. Studies have started to incorporate people's perceptions and the idea that poverty is socially constructed and culture-specific (Gordon, 2010). This belief has led to the introduction of multidimensional aspects of poverty recognising that poverty is more than the lack of income and includes aspects related to health status, educational attainment and standard of living (Walker, 2014). In Chile and Latin America an approach based on basic needs has been the norm and gender variables have not been systematically included (MIDESO, 2016). There have been efforts, however, to incorporate multidimensional methodologies and to go

beyond income-based poverty. Since 2015, Chile has been including variables such as access to education, years of schooling, malnutrition, health insurance and access to health care. Additionally, other variables related to work such as kind of employment, social security, pensions, and housing (overcrowding, house conditions, access to basic services) have been added to the assessment of poverty (MIDESO, 2016). However, there is still a strong focus on income with neglect to people's perceptions and the psychological impacts of poverty. The UN has defined poverty as:

a denial of choices and opportunities, it is a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or a clinic to go to, not having the land on which to grow one's food or a job to earn one's living, nor having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence and it often implies living on marginal and fragile environments, not having access to clean water and sanitation (United Nations, 1998).

In this regard, relative poverty does not only refer to material deprivation but also to non-material dimensions which according to Yongmie (2012) cannot be understood through income-based measures or even multidimensional measures. In general, and as it is clear in this study, the work women do responds to gender divisions of work and cultural expectations which are reinforced by discourses on community work and mutual aid. Moreover, there seems to be an assumption from the APR programme on women's dependency on a male partner, or the existence of a family network where support from their mothers and other women in the community is essential. This was clear in my fieldwork as female *dirigentes* were able to work for their APRs because they either lived in their mother's house or land in the case of lone mothers Mariana and Gloria, or because their partner provided them with material support in the case of Ignacia.

Another interesting feature of the drinking water institution I was able to see is the overrepresentation of women at the local and municipal levels, especially overrepresented in unpaid positions. As I scaled up the institution, however, and interviewed people located in universities, government offices at the regional and national levels and politicians in paid positions, women were outnumbered by men. What Smith (Smith, 1987) wrote in the 70s and 80s about unequal representation of women in decision-making processes and knowledge production (Smith, 1987, p. 27) is still relevant today, at least in the Chilean context. Women are often excluded from higher-paid occupations meaning their wages will be lower than those of men.

However, the effects of female poverty have received little attention in Chile and the role of women and their experiences of being burdened by trying to combine care and work have not been considered (Litvak-Cooper, 2018). The World Bank and the Inter-American Development Bank have promoted policies that encourage 'gender mainstreaming' and women participation in overcoming poverty (The World Bank, 2006). In this way, women become not only the main caregivers but also the main providers of solutions in their communities. This is what I have observed during fieldwork where Mariana, Ana, Gloria, and other women take on the responsibilities and obligations towards not only their families but their communities. When Mariana says she is able to be the president of the Committee and work for her community because 'the rest of the people don't have the amount of time that I have' she is implying the rest of the (male) directors are busier than herself as they have "proper" jobs. She explains the reason why she can do this is because her own mother helps her with some money. Moreover, she does not pay rent as she lives in her mother's house. The APR programme not only exists because of but relies on, the work of rural women and men who must give up an important amount of their own time to undertake all the activities involved in what "community water management" requires.

The crucial role of informal support in the work of the APRs and their board of directors and *dirigentes* is not accounted for in the official story of the programme. *Dirigentes* participate in a reciprocal support network of collaborations, allowing them to act in association, interacting with

the authorities and asking for changes in the legislation. As briefly explained here, welfare and subsidy programmes in Chile have been introduced in a top-down manner, mainly designed by a political elite without the involvement of the people they aim to benefit (Litvak-Cooper, 2018). The main problem with this kind of models is the disconnection between theory and practice where interventions are implemented with good intentions without understanding people's needs.

Throughout these chapters and as a result of the analysis described so far, I am able to see the work undertaken at the local level by *dirigentes*, as a response to the lack of appropriate State support in providing quality drinking water at a similar price to that available to people in urban areas. The result for standpoint informants is that the cost of living outside cities falls on the shoulders of individual small-scale farmers, pensioners, and/or housewives who are looking for a better quality of life in the countryside.

When in the Chilean countryside, we are looking at a means of water delivery that exists within the contemporary global capitalist system even though the work of the APRs is based on mutual aid and community values. The APR programme, its new Law on RSS, and the work of the Federation do not escape this broader capitalist organisation. The work of APRs and the Federation is at the same time challenging and vulnerable to the organisation and change of this system (Wagner, 2014). The values of cooperation and mutual aid operating among the people from Arrayán and the APR are constantly undermined as people become subject to a social organisation that is favourable to industrial uses of water and benefits productive uses over reproductive ones. What I have learned is that community-based water management does not occur in isolation from the wider organisation it is surrounded by and embedded in. This is what the next Chapter explores.

Chapter 9: Community water management as a textually mediated discourse

In Chapter 2 I mentioned there are three approaches for textual analysis in IE and as explained by Murray (2018, p. 96), these are situated in a spectrum of closeness to the text.

I used the first of these approaches to take a close look at specific texts that have a regulatory character such as the Water Code explored in Chapter 5 and the RSH explored in Chapter 8. I also explored the textually mediated application process of the I&E project where I analysed the texts that play a part in organising people's work at different levels of the institution to accomplish the project by which the APR can do their work and give water to Juan (Chapter 7).

Another method IE offers to analyse text-based practices is to look at an array of texts and ideas in a more diffuse way. This is what this Chapter does by looking at how different discourses cut across institutions. For example, the textually mediated discourse on "community water management" put forward by the APR programme works within a broader ideological discourse of water rights, vulnerability, and mothering work. I claim that instead of escaping the logic of water rights and neoliberalisation, the APR programme works to reinforce it. I show how water rights and socioeconomic rating intersect in different ways to organise the everyday work activities of rural people in the local setting.

The social organisation of water rights

I could have picked any circumstance to explicate the problematic I constructed in Chapter 6 and to make visible how this comes to seem simply "how things happen" in the local setting, and not as explicitly organised for the benefit of some at the expense of the many. I have come to realise that the way in which things happen for standpoint informants and people in the local setting is a complex of several ruling relations that interact with each other.

In Chapter 5, I described how water from rivers - a natural feature of Chile - is turned into a commodity, can be sold, transferred, auctioned, and used for profit-making. This, in IE's technical terms is a 'ruling relation' occurring within a neoliberal social organisation of "water rights". In the book *Under New Public Management* (Griffith & Smith, 2014, p. 1) a global shift is described from times when multinational companies worked within national boundaries to an economy where transnational corporations have no such loyalty, benefitting from free movement of capital and relocating to countries which regulatory framework suits them. Without an analysis and explication of the social relations of production of water as a commodity, this phenomenon appears to be the organisation of the distribution of (drinking) water.

I have noticed how these relations of ruling have entered people's lives in taken for granted ways, disorganising and reorganising their lives destructively. For example, the lives of Juan, José and Fito and in even more destructive ways in La Ligua and Petorca (Budds, 2004; INDH, 2014; Larraín, 2013) where water thefts and illegalities have been downplayed by the authorities, contrasting local claims (Interview with Leader of MODATIMA).

The *Canalistas* represent the productive sector in the country including not only the agricultural industry but also mining and hydroelectricity. They oppose the Water Code modifications as these would grant more powers to the DGA to oversee the management and fair allocation of water resources, avoiding water usurpation¹⁵⁹. Those opposing the modifications to the Water Code believe these discussions have turned into ideological debates and that people should listen to "technical experts" for advice (Musquiz, 2016) suggesting experts are unbiased. Powerful sectors see in these modifications a will to nationalise water which is not what the current modifications are proposing as there would still be a water market in place, as explained to me by Aranda, a lawyer who specialises on water legislation. In an interview, Aranda told me the modifications currently proposed would not produce any changes unless the Constitution is modified.

¹⁵⁹ For more information on the international work of MODATIMA please visit: <http://modatima.cl/>.

The Constitution currently establishes ‘a person’s rights over water, recognised and constituted in accordance to the law, will grant them the property right over water’ (MINSEGPRES, 1980, art. 19). This means the only way for this property right to cease to exist is by means of expropriation which is difficult when water rights were given in perpetuity, for free, and unconditionally.

Aranda thinks that even the expiration of water rights after 30 years of no use¹⁶⁰ would not be a serious threat to water owners as these would be revoked only if the person had not used water or did not prove attempts to collect that water. Moreover, the DGA is so weak in its attributions that it would be very unlikely for them to take water rights away from people. As the Constitution is at the very top of Chile’s normative pyramid (the “bossiest” of boss texts), it sets the structure by which all other legal texts and regulations need to conform to. Aranda suggested that although the Water Code proposed modifications suggest some progress, they will not solve the problem of guaranteeing the human right to water.

Changing the Constitution is almost impossible at present. Within this boss text, which was carefully elaborated by Pinochet’s advisors, right-wing parties have a huge advantage. The modification quorums to change the Constitution require 80 out of 120 deputies, and 25 out of 36 senators to vote in favour of these modifications. This means right-wing politicians need to agree to these modifications which most likely will not happen. Additionally, even politicians in the centre and left have vested interests which makes it even more improbable (Interviews with Aranda and Leader of Modatima). Thus, the whole legal Chilean landscape has been working under the Constitution’s logic which has not been substantially changed since 1980.

I think about Peralta’s comment on the work of the fire department in Chile which is voluntary. We also have the *Teletón*, a weekend once a year where people are asked to donate money for a centre where children with disabilities get rehabilitation. This also reminds me of my interview with Ignacia (in Chapter 7) where she regrets having worked for the APR and explains that the State must have saved enormous amounts of money through the voluntary and unpaid work of

¹⁶⁰ As proposed by the attempted modifications to the Water Code described in Chapter 3.

dirigentes. I see links between these experiences and the social imaginary the Constitution aspires to and which is very far from the logic on which the APR programme is based. The Constitution is based on a logic of individualism which has percolated to all areas such as education, health, the pensions system, and water management. Within this logic people are deemed responsible for their poverty, lack of quality education, lack of health care and in this case, access to quality drinking water. Aranda mentioned his work with *dirigentes* and employees from the APR Programme in creating the Law on RSS was inspiring. In his view, this Law is by far the most participative legislation ever passed in the country. He questions, however, the real weight this legislation will have beyond the work of the APRs and in terms of water ownership and access.

Aranda: What is the purpose of this new Law if we cannot guarantee the human right to water in the Water Code and in the Constitution? It is of course a good tool for the APRs and it will end the contract between the DOH and the Technical Units¹⁶¹, but it is without doubt insufficient, and we would have to modify the Constitution for the Law [on RSS] to have some consistency (Interview with Aranda, MOP lawyer).

When I was in Algarrobo-Viejo, Ana mentioned the new Law on RSS would not mean too many changes for them apart from Aguas del Valle no longer being the Technical Unit. However, she mentioned they would still have to buy water from AdV as the Committee does not own enough water rights. Moreover, the efforts Ana and Mariana have been through in trying to buy water rights from Canal Algarrobo are activities they realise within the neoliberal system of water management. Buying water from AdV also makes them participants in water commodification. Based on the logic of working with a social aim and for the community, APRs work within a system that oppresses them. When Mariana said to me that people from Arrayán needed to make an effort to come up with the money for the I&E project, she mentioned the APR had no ‘granny’s heart’, meaning that people need to work for their access to water (Chapter 6). In her view, the

¹⁶¹ This is the contract stemming from article 2nd transitory of Law Decree 382 (illustrated in Chapter 2, figure 5) by which the DOH externalises its advisory role with APRs by hiring sanitary companies in each region to do that work.

preliminary study must be paid by those requesting water as each one has to find their own means.

This neoliberal discourse is in line with what Aranda mentioned about the logic behind the Constitution, and how it is reinforced in inter-textual circles where the Water Code and the RSH have embedded in them the same logic as they respond to the instructions of this boss text, as shown in the previous Chapter. This logic is so pervasive that even the *dirigentes* of an APR who work on a voluntary basis, believe people in rural areas need to make an individual effort to access water. This is revealed in the ideological code of “mothering work” I describe in Chapter 6 and 8 where historic and capitalist relations privilege certain understandings of the work *dirigentes* should do for their communities. Several aspects of “community water management” rely on this mothering work which is done for water access.

The way in which water rights are created as facts within a broader discourse of appropriation and profiting allows for water to be organised in such a way that Juan has to pay for the extension of the rural water system as he is “not vulnerable”. However, vulnerability is not considered when looking at water rights as a marketable good. This situation uncovers a contradictory and highly political landscape and shows how the RSH and the Water Code work together under the same logic of individualism and property rights.

A text’s replicability means that it is recognisable as the same regardless of the location of the reader/hearer. This attribute of texts such as the Water Code, or “water rights” as an occurrence of the text, connect people across time and place organising their activities. However, replicability does not mean that every occurrence of the text is read in the same way because the text will be interpreted in different ways depending on the context. In the case of water rights and their implication for rural drinking water, the context of scarcity and even climate change is absent from the Water Code. Moreover, geographical, social and economic differences within and among regions are ignored which is especially relevant in Chile.

The importance of inter-textualities

Smith uses the word 'interlocking' to explain institutional organising as a property of texts by which an institutionally recognisable process occurs. For example, the fact that AdV owns water rights, positions them in a role whereby they are the sellers and the APR is the buyer as the APR does not have ownership over water. This transaction and the roles attributed to the APR and AdV are materialised in the "52 b contract" by which the selling of water is accomplished. This specific act is situated within an institutional logic that is supported by higher-order texts such as the RIS which form an important part of the application process for the I&E project as explained in Chapter 7. There is no escape from the ideological discourse of water rights as its logic is embedded in the way water is managed throughout the country and it even permeates those areas where there seems to be social cohesion and where communities work towards fulfilling a basic need. Texts in this institutional field, organise readers in a social activity into textually mediated processes that coordinate what people do in different settings. Institutional employees and front-line workers are trained within the APRs, the DOH, the MIDESO, and GORE to fit people into specific categories that do not escape the neoliberal logic embedded in the Constitution, the Water Code, and the RSH.

The interlocking nature of institutional processes means that texts are most thoroughly understood in relation to other texts. For example, Aranda's comment about the Law on RSS being a good tool but not enough in securing the human right to water, reveals the textually-mediated process in which inter-textual references to other legal texts are necessary to fully understand the weight of the Law on RSS in changing the conditions in which APRs currently operate. Inter-textuality is not abstract, but a concrete practice where people make reference to established frames and concepts to which people's actualities need to conform. This is how the experiential account of Juan and Fito when they say 'we are not vulnerable, but we are not rich either' reveals their situated knowledge is displaced in favour of the temporal institutional reality of the RSH. Spending important sums of money to get access to water could change their

vulnerability status but their financial situation post-investment is not considered within the RSH time frame.

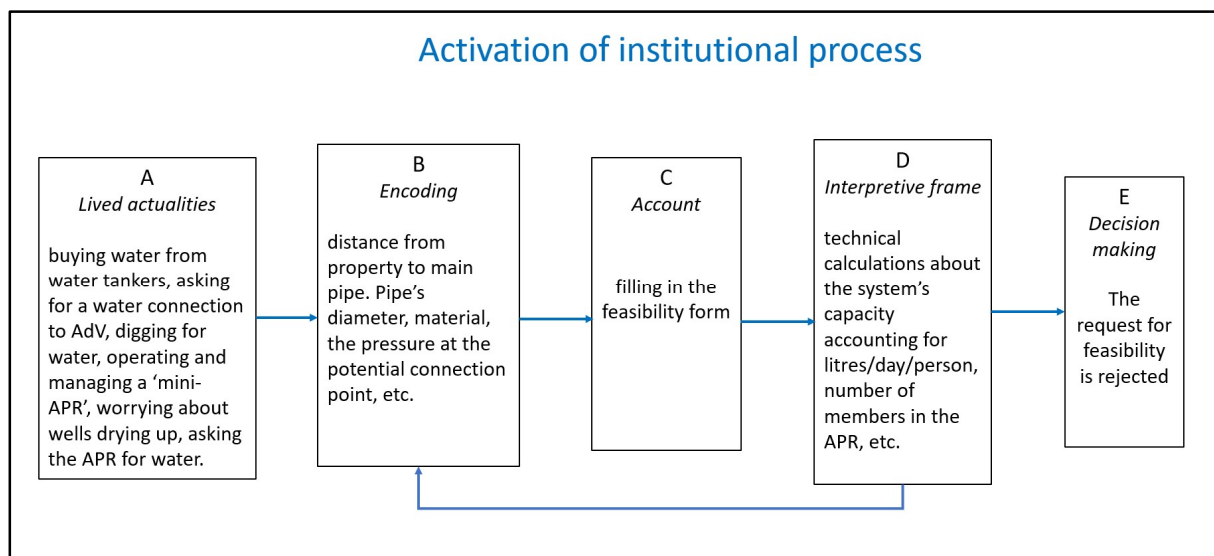
The APR programme occurs in a highly textualised process which I have materially explored by looking at the I&E project. It also works as a self-reproducing ideological code, 'a free-floating form of control in the relations of public discourse' (Smith, 1999, p. 175) organising people's lives and activities through constructed notions of "vulnerability" and "water rights".

The ideological discourse analysed here is about the organisation and interpretation of concrete activities people do in their local setting and which are coordinated with activities done by other people in other sites when reading and writing institutional texts. The ideological discourse on "water rights" provides the terms, concepts, and guiding frame that act as a higher-level discourse organising the institutional discourse (Smith, 2005a) of "community water management" portrayed within the APR programme, the Law on RSS and the work of *dirigentes*. The community water management discourse, hence, does not exist independently from the neoliberal discourse of water rights, just as the APR programme does not exist independently of the Water Code and the social organisation it coordinates. For example, front-line workers like Ana and *dirigentes* like Mariana are participating in and reproducing discourses that allocate the responsibility for water access to individual people. They have learned through their own work and through the talk of people positioned in higher levels within the institution, about activities based on a regulatory text that they may have not read or heard of. Their activities are organised without them necessarily intending the use of the regulatory text.

Revisiting ideological circles

The first Ideological circle I encountered was the “feasibility form” which was filled in on behalf of the people from Arrayán by Susana at the APR. The need for water a few people experienced was inscribed as a “fact” in the feasibility form, making that need institutionally recognisable:

Figure 11: Ideological circle activated at the Committee



Source: Adapted from Campbell (2001) and Smith, G.W (1988).

The last action of the people from Arrayán in box A is “requesting drinking water from APR” which produces the encoding in box B by which the technical aspects of the APR are noted. This encoding responds to the interpretive frame of the *Requisitos de Inversion (RIS)* for APR projects explained in Chapter 7. The RIS for the water sector include rather arbitrary commands that will help build the facts through which the APR capacity to provide water to the people from Arrayán will be assessed. That is the underlying pattern to which the actualities of the local setting are subsumed. When this request for water is rejected at the regional DOH people from Arrayán are drawn into the I&E project process which begins with the preliminary study.

Standpoint informants are also assessed against the interpretive frame of the RSH in order to select, order, and categorise aspects of their lives that will then be used to position them as “non-vulnerable” and by which they will be made responsible for providing the APR with a preliminary study. The underlying pattern of what is understood as a “normal” APR is defined through the RSH and this definition needs to match the definition of APRs as understood in the documents available on the APR official website. In these documents, APRs are located in rural and usually poor areas (MIDESO, 2015b, 2017). These official texts establish the procedures to look for evidence and for documenting who will benefit from the APR system. This does not mean, however, that Algarrobo-Viejo or Juan are wealthy; it means they are described as such only in reference to how APRs are described in those official texts.

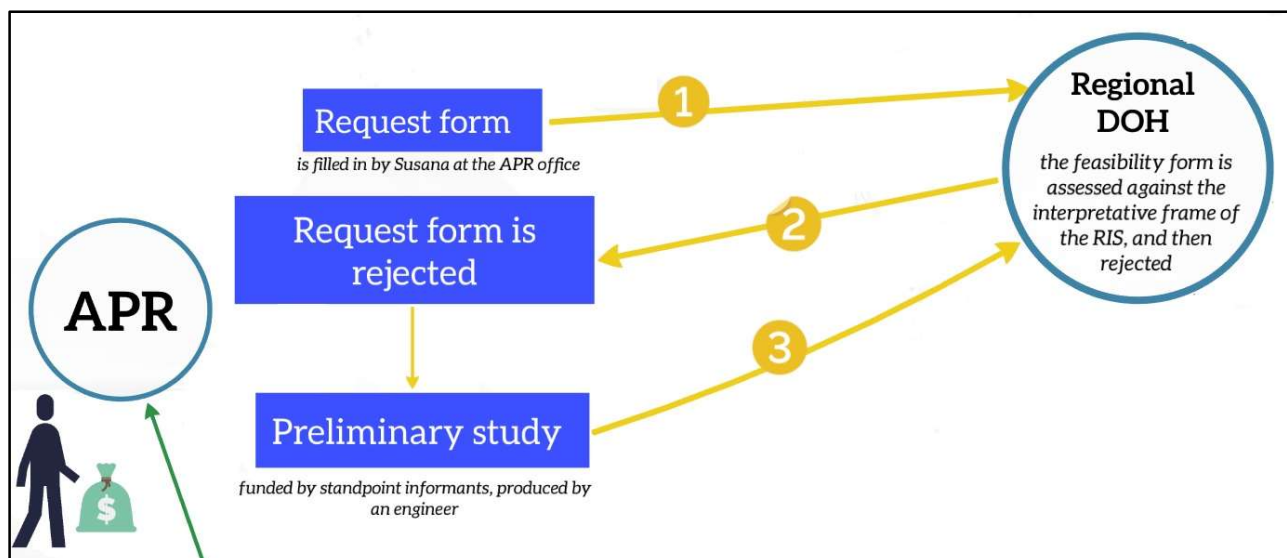
This is how ideology works in a circular way. Organisational practices describe people living in rural areas in an abstract way. Juan’s need for water in a rural area is described as “too expensive for the State” and the process focuses on the fact that Juan is not poor instead of drawing attention to the fact that water is a human right to which everyone is entitled. This transformation is essential to the organisation of “community water management” and it is how the rural world and rural people are governed. Conversely, Juan’s water access when he lived in the city was not subject to his vulnerability status because the infrastructure to deliver water to urban areas had already been built. In urban areas, vulnerability is not a category organising access to water.

As described, the work of the APR is organised by several texts working together to coordinate and rule people living in rural areas. This must be reported in a course of action where appropriate assessment bodies decide what actions will follow and define the facts used in making a decision on who gets access to drinking water. It is not the personal acts of Susana, Ana, or Mariana, nor of Pamela at the regional DOH, or of people at MIDESO. These are constructed from the standpoint of a “neutral” state actor or technical expert.

The practice of inscribing actualities as inputs for an institutional course of action is the organisation of objectivity. As seen in figure 22 below, the work done by Pamela at the regional DOH follows a mandated course of action residing within the social relations of community water management and these relations are made up of concrete sequential moments. This process appears as objective and neutral one that takes place in different sites of ruling.

Firstly, the production of the preliminary study paid by the people from Arrayán who have previously organised in an institutionally recognised community under Law 19,418 on Neighbourhood Boards and Community Organisations (Ministerio del Interior, 1997) as “Community Organisation of Easter Arrayán”. The first institutionally visible step is when standpoint informants are categorised as non-vulnerable and identified as responsible for commissioning the preliminary study and for paying a part of the project (approximately 6%). Nonetheless, standpoint informants engaged in several activities prior to requesting water from the APR and completing the feasibility form. These activities, which I described in detail in Chapter 4, are invisible to the institution and are nowhere recorded.

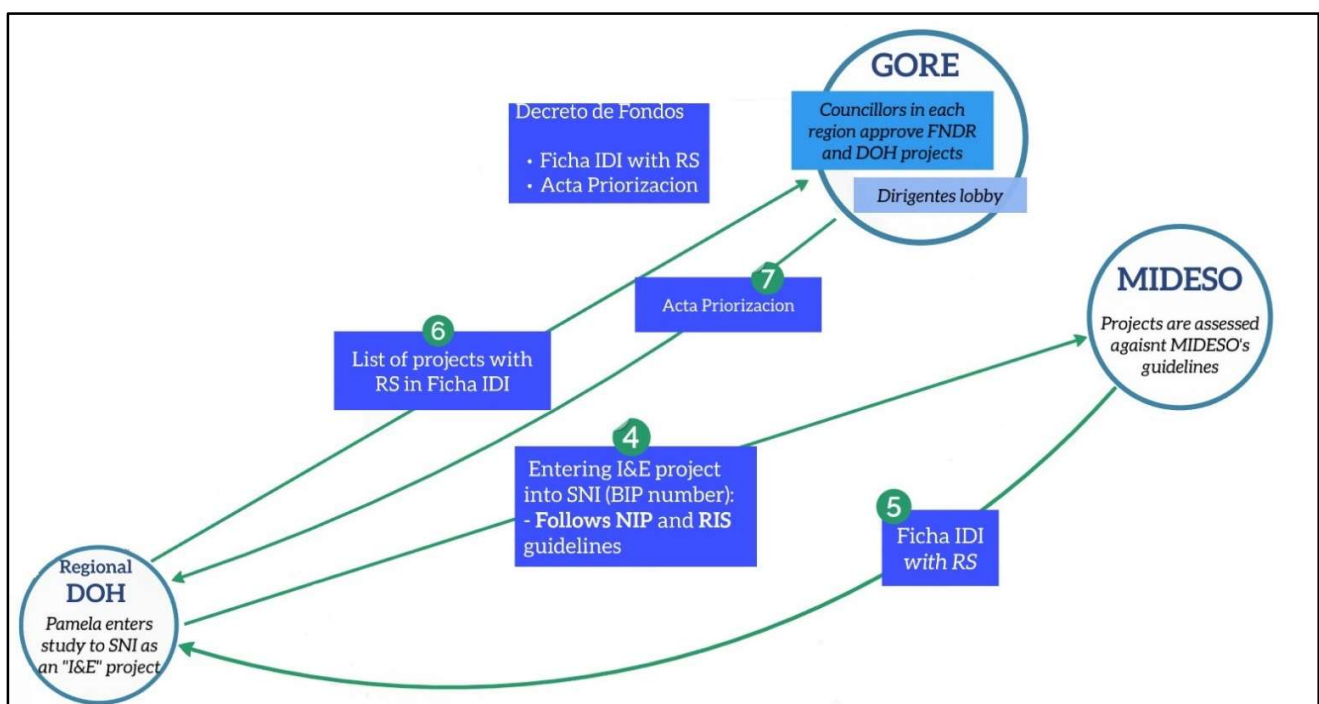
Figure 22: Texts mediating the social relations between the APR and the regional DOH



Source: Author

Secondly, the textually mediated process that intends the I&E project is put in place and the work of the DOH in adjusting the requirements for an extension of the APR system in Algarrobo-Viejo is entered into the *Sistema Nacional de Inversiones* (SNI). The process follows the norms of the BIP in accordance to the NIP, more specifically the RIS for the water sector. In this sequence of actions, former moments intend the project as an outcome of the process. This textually mediated process involves work done by employees at MIDESO where projects are reviewed according to their guidelines resulting in a RATE¹⁶². Then the DOH sends a list of projects to the GORE which have already obtained a RS¹⁶³ from MIDESO. The GORE's Councillors make a list of projects they approve and prioritise for their region and which will be considered for funding.

Figure 23: The textually mediated process that intends the "I&E project"



Source: Author

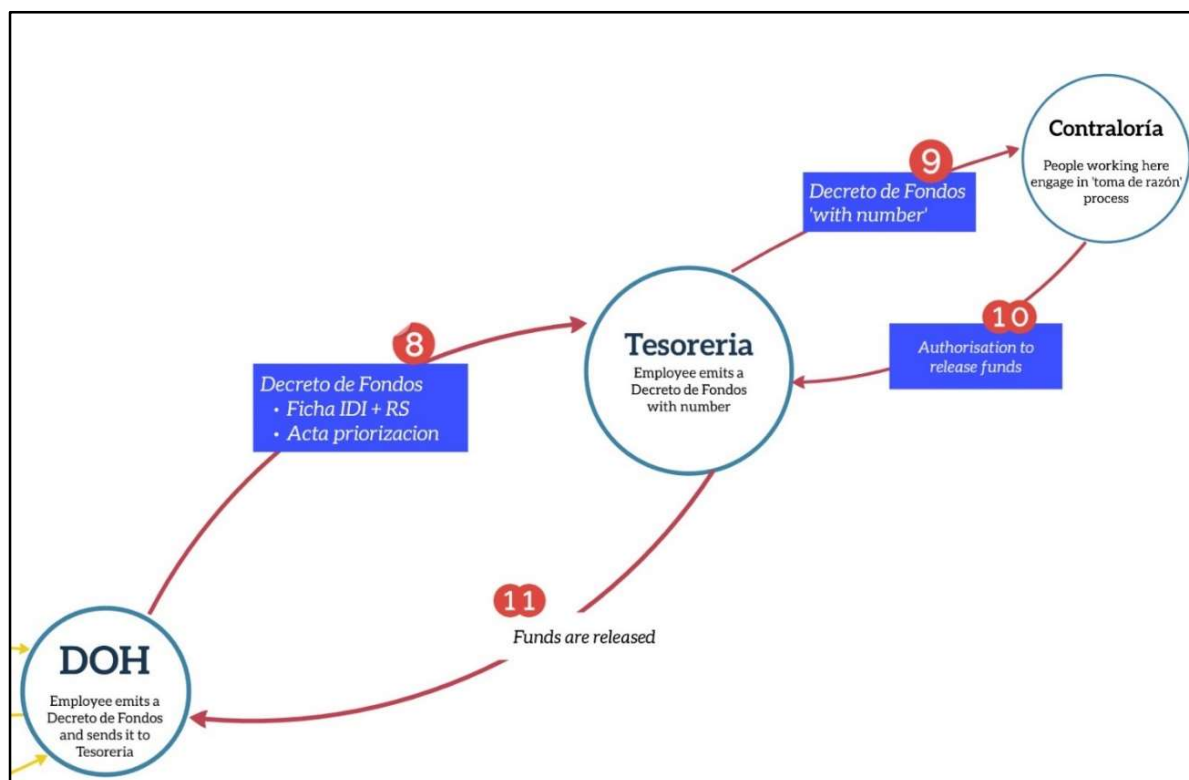
Figure 24 indicates the work done at *Tesorería* and *Contraloría* after the GORE has approved the projects. These work processes relate to the authorisation request to *Contraloría*. Projects at this

¹⁶² *Resultado del Análisis Técnico Económico*, in English: Results from Technical and Economic Analysis

¹⁶³ *Resolución Satisfactoria*, in English: Satisfactory Resolution.

stage can still fall through and the whole application process would have to be done again, as I was explained by an employee at MIDESO.

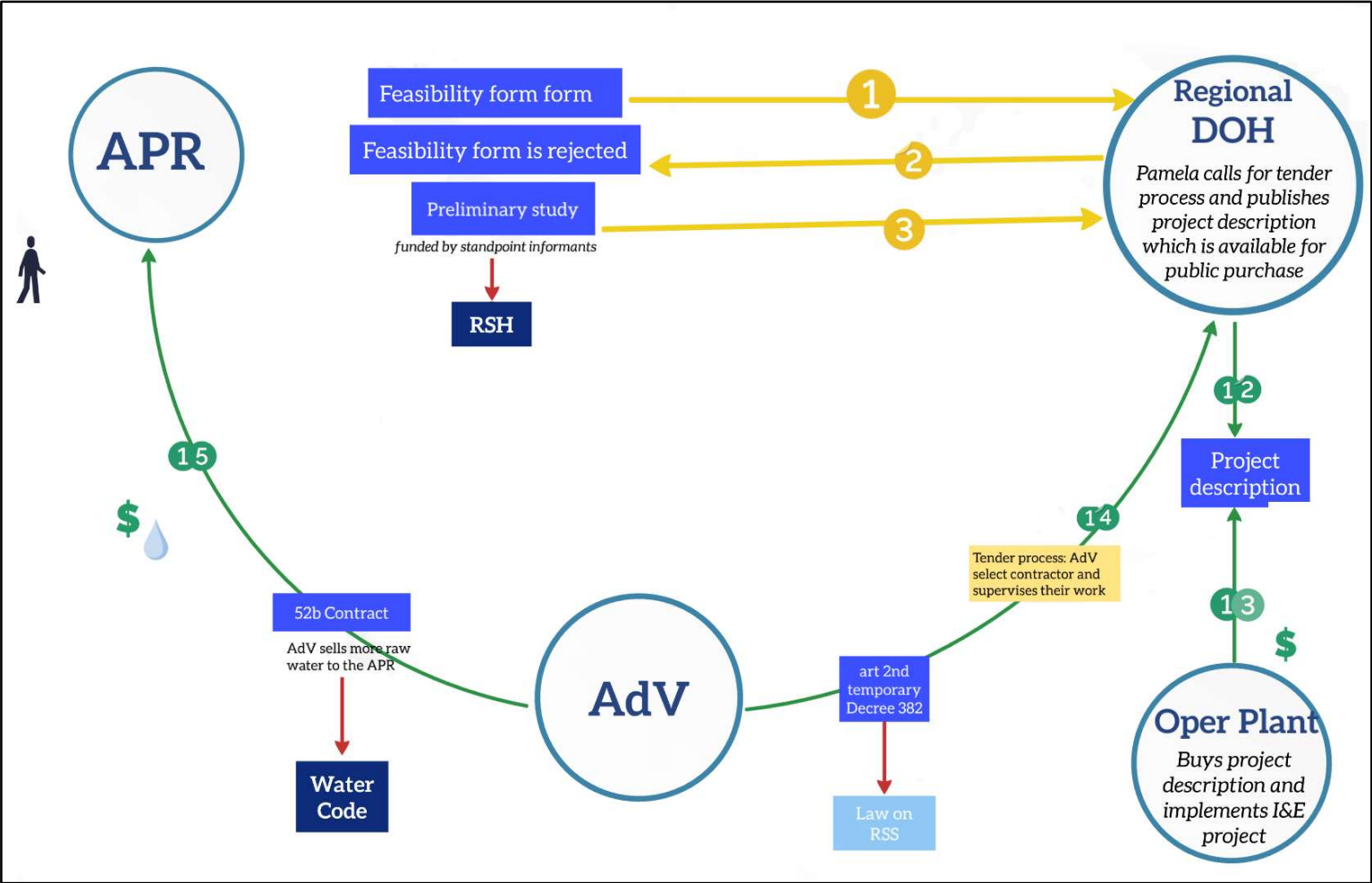
Figure 24: Text mediated process where funds are allocated to the regional DOH



Source: Author

Once the resources are released and sent to the regional DOH, Pamela can call for a tender process in which the description of the project is available for purchase by possible contractors. In the case of the I&E project the contractor in charge of implementing the project is Oper Plant, as seen in figure 25 below. Their bid is assessed and selected by AdV who also supervises their work (numbers and arrows in green).

Figure 25: Textually mediated process where the double presence of AdV comes into view



Source: Author

The work of AdV is stipulated in 2nd temporary article in Law Decree N°382 where AdV is the TU in charge of representing the DOH on the ground. This relation would change when (and if) Law on RSS enters into force. However, the contract by which AdV sells water to the APR will not be modified by the new Law on RSS.

This is a heavily organised process where texts coordinate the work people do in each one of these settings. The concepts of “rural” and “vulnerable” are central as they bear an organisation that helps enforce the social relations that define rural people as vulnerable, and by which those who are not vulnerable are not eligible for water. The antithesis of this organisation is urban water where people only pay for their water tariff as the State has already funded the infrastructure. In urban areas, the conditions have already been laid out by the State so the sanitary company in each region can profit from delivering drinking water and sanitation to urban citizens (MOP, 1989).

The social relations of “community water management” are not theoretical but concrete, practical ways in which a ruling apparatus governs rural lives whether vulnerable or not. This is how access to water in the rural world is organised and how the social organisation of knowledge about APRs is created, so that they want to protect themselves from sanitary companies by eliminating the link between the DOH and the TUs.

But what I am also showing in figure 25 is that the social organisation of “community water management” is part of a broader ruling apparatus which purpose is to enforce the profiting of multinational companies by allowing the business of water to go on in rural as well as urban areas. The ruling apparatus through the APR programme, makes sure local people are busy doing “mothering work” which involves dealing with the problems OP causes with its unprofessional work. Mothering work also entails the work of APR directors and staff in dealing with members’ complaints about poor water quality. APR Directors liaise with authorities and ask for help and funds from the DOH, and in some occasions they need to ‘put on a show’ to call the attention of the authorities, as Mariana explained. The APR programme imposes additional burdens on people working at the Committee, whose efforts in the local setting are aimed at delivering water to people and dealing with complaints. As the Environmental Health Officer at MINSAL said ‘there

is nothing more violent than taking water away from people, and for them to have to leave their villages as a result of this'. The work dirigentes and APRs do is possible because water is a necessity and people will engage in this work if they are left with no option.

The documents I have shown here are part of an active process and a major finding of this exploration is the textually mediated property of the APR programme, created beyond the local setting and which heavily relies on texts. This process is not clear from within Algarrobo-Viejo and is not publicly available for people to see and scrutinise. Only those with expert working knowledges know how it works, such as Gloria and María who was in the CORE meeting lobbying for her project. However, Mariana and Ana are not fully aware of this process, nor were Juan, Fito and José before moving to the countryside in search for a better quality of life. This is how the State of Chile is encouraging people to move to the countryside in its aim towards decentralisation (CAPDDR, 2014).

I have shown how Juan's need for water is superseded by the fact that he, according to the RSH, is not vulnerable which means the State has no responsibility in delivering water to rural people in his position. It also means, because he is in a rural area that the sanitary company is not responsible for providing him with drinking water. All this results in Juan investing and making the effort to fund part of the I&E project. Moreover, this system suits water owners willing to sell water rights and make a profit from the fact that APRs like Algarrobo-Viejo have no water rights. A recent study (Arellano, 2013) reveals Isidoro Quiroga, an entrepreneur known as the "water zar" has made more than US\$ 25 million over the last 5 years by selling water rights he obtained for free from the State of Chile. This is legally done under the conditions the Water Code and the Constitution currently allow.

The documents I have analysed are institutional texts that coordinate the extra-local relations that regulate what people need to do for water access and delivery. In addition, they coordinate ruling at various sites and keeping the rural world in poor conditions. The effectiveness of that ruling is textually mediated and produced by the inscription of facts whereby only vulnerable

people are supposed to live in rural areas, where rural is synonym of poor, and where communities are poor and help each other out, embedding these individuals into the business of water. As shown here, the relations of ruling in our capitalist society are organised by texts which is how neoliberalisation and the commodification of water occurs. The same happens with community water management which is a textual process where the need for water reveals a world beyond the APR and heavily organised by laws, texts, application forms, and generalisations.

Chapter 10: Conclusions

My aim when embarking in this project was to understand how rural water management worked in Chile. I was surprised by how a community led programme had survived in my country, which has been a laboratory for the most neoliberal experiments since Pinochet's era and where contemporary corporate capitalism thrives in most social organisations. I mapped a view into the organisation as I saw it with the time and resources I had. This is, however, an open project and anyone could pick up some of the threads I have sketched here and further explore them. I chose to pick up one of them, the I&E Project, as its disruptive effects were organising people's activities in the local setting. There are other fascinating threads worth of exploration such as the process of participation in Law on RSS and its textualization. Another threat which is currently taking place is the textualization of the proposed modifications to the Water Code.

I started in the experiences of standpoint informants and how their entering into the Committee Algarrobo-Viejo propelled them into a larger organisation of *water rights* and *vulnerability*. I mapped a small group of texts, focusing on the feasibility form to then go further into the organisation of (drinking) water in Chile. I began locally within one APR. I focused on the RSH and the Water Code because of my focus on standpoint informants and their concerns, which guided me to these regulatory texts.

I have been able to see that the work of the Federation concerned with protecting community water management as a model of social cohesion and mutual aid—as opposed to the work of sanitary companies—has not focused on the law which provides for the profitable business of water. While the Law on RSS will work to acknowledge the work of communities in delivering rural drinking water (in the language of values) and protect the community water management model, it will not devolve water to communities and their environments. This would be possible if changes in the Water Code and the Constitution are made. These texts will need to be modified if we want to make actionable the human right to water as there is no space within these texts

for knowledge stemming from alternative ideological positions that do not aim at profiting from either the unpaid labour of rural people or nature.

I have seen and demonstrated how the business of water is funded in part, by the efforts of people like Juan, Fito and José who 'are not vulnerable but are not rich either'. This business is also possible through the mothering work of people like Gloria, Mariana, Susana, Tamara, and their mothers and grandmothers whether paid or unpaid. Their work sustains the ruling apparatus that subordinates their experiences. Meanwhile, the State of Chile supports this business by protecting the interests of agro-industrial businesses, subsidising the work of sanitary companies in urban areas and increasingly relying on water tankers to provide drinking water "solutions" (Interview with Environmental Health Officer, MINSAL).

The feasibility form, the RSH, and the Water Code act as organisers constructing reality and facts regardless of whether those facts are "true" or not. We cannot know this from the texts, but we need to "trust" their judgment. This shows how these texts are active and how people need to read them. Juan's account about not having access to water or not being "vulnerable" is assessed against a textual reality where his experience is taken out of its locus and placed within a broader use of time and space. His experiences are assessed against a frame of reference about "water availability" or "capacity of systems" or "vulnerability" measurements.

In analysing texts, I focused not so much on the content of these texts but on their origins and how people have come to read them and use them. I focused on how people are positioned by these texts and the instructions that indicate how they should be read and acted upon. I also analysed the structure of these texts and how they construct facticity, identifying certain features of actualities regardless of whether there is "capacity in the system" or "physical availability of water", or whether people see themselves as vulnerable or not.

I paid attention to how the structure of for example the feasibility form, is active in guiding the readers' interpretations of it and the subsequent texts or activities stemming from its activation.

The text sets a specific criteria and structure for assessing evidence for “connection feasibility” to the water system. There are constructed causal relations between the amount of water a household should use and the perceived lack of capacity in the system which connect to broader schemas of litres per person with their origins in other texts created by people located elsewhere.

The texts I analysed here give the impression that they are neutral and objective, based on engineering facts and statistics that allow for comparisons between actualities and with no attention to context, which in Chile’s geography has important consequences for water access and family income, as prices differ from north to south. When looking at such institutional texts, I have searched for the ways in which they organise readers and achieve their aims as part of a broader text-act-text sequence of activities within the wider organisation of (rural drinking) water, constructing causality and facticity and an official story.

I also mapped an ongoing institutional action, a textually mediated process which was considered in the local setting as bureaucratic. I used interviews and observations and read texts that exist in relation to other texts and which were involved in the I&E application process. I was able to identify inter-textual links or threads that draw them together into a sequence of institutional activity.

I discovered the use of IE as an approach to look at the application process and beyond it to explore the organisation of what is known in the literature as “community water management”. I learned IE can provide tools to do the mapping other studies theorise about. In this process, standpoint informants are active in drawing others into the work processes involved in rural drinking water delivery. I was able to analyse the connections between people’s activities, institutions, and global capitalism within what we call “community water management” where the commodification of water goes on. For example, I showed how the RSH organises what APRs can and cannot do for people in need of water and how they are discouraged from submitting projects that arise from the needs of people who are “not vulnerable”. As Mariana mentioned: ‘we didn’t want to give them water, so they had to pay for the study and then we presented the project on their behalf to the DOH, but they paid for it’.

These practices organise water management at different levels as market speeches filter down and organise everyday interactions between people even in those places where mutual aid and a cooperation spirit are thought to prevail. This is not due to a lack of will from the APR staff or because of negligence, but it is because Juan's needs are institutionally organised to make access to water more difficult for people in the local setting.

Access to water for people living in rural areas is organised to be carried out by people who in many occasions are not trained to manage a water system and who are expected to work on a voluntary basis with very little support. The new Law on RSS will include within the tasks APRs need to fulfil the creation, management, and supervision of sanitation systems (MOP, 2017) which will only increase the demand on APRs staff and *dirigentes*.

The emphasis on the RSH and its powerful organising character would have been easily overlooked had I based my understanding of the APRs on the official story by focusing on Law on RSS. The Law on RSS, even when important and present in the local setting works within the intertextuality Smith refers to (Smith, 2005c) and it is subordinated to the Water Code in the way APRs access water. Moreover, it works at a national level and not yet at the local scale.

Similarly, I could have looked at the "neoliberalisation of water" focusing on the Water Code and water rights, perhaps ignoring or bypassing all the other aspects I have analysed such as the importance of the distinction on vulnerability or how pervasive the influence of AdV is beyond acting as the Technical Unit. I would have overlooked though, the ways in which the work of women and men in rural areas supports the work of AdV not only through their buying of water, but more importantly through its deficient work as TU.

I realised the bureaucratic process of the I&E project was not even about water delivery and access, but about other things that kept distracting people as they need to deal with unprofessional companies and what members see as issues of water quality. The I&E project demanded a significant amount of time and effort from everyone involved in it from the APR to the *Tesorería* and *Contraloría*. However, it is not dealing with the core issues underlying the unfair

distribution of water rights and delivery and uses vulnerability as an indicator of people's perceived eligibility for water access in rural areas. The processes explored work to concretely discriminate people according to where they live. Their access to the human right to water depends on these discriminatory measures.

In terms of decentralisation efforts, the provision of water of good quality should be crucial, otherwise that political idea is just that: a statement of good intentions with no practical effects. I remember the words of the Community Leader of the APR Programme in Santiago: 'It is as if there are no people living in Chile, just companies and elite groups.' As long as economic imperatives are at the core of the organisation of water management in the country instead of the human right to water or ecological considerations, rural populations, communities, and ecosystems will remain oppressed.

As I have shown, there is no place within the current Water Code nor within the Constitution for the human right to water. Thus, to make this human right actionable, an institutional process needs to be put in place to concretely organise water access and delivery to all citizens. This would allow us to move from good intention statements to practical solutions.

Bibliography

- Acevedo, A. (2014). *Marco institucional para la gestión integrada de cuencas hidrográficas*. (BA Law and Juridical Sciences), Universidad de Chile, Santiago de Chile.
- Algarrobo-Viejo, C. (2003). *Estatutos del Comité Algarrobo-Viejo*. Chile
- Ananda, J., & Proctor, W. (2013). Collaborative approaches to water management and planning: An institutional perspective. *Ecological Economics*, 86, 97–106.
- Anokye, A., & Gupta, J. (2012). Reconciling IWRM and water delivery in Ghana – The potential and the challenges. *Physics and Chemistry of the Earth*, 47-48, 33–45. doi:10.1016/j.pce.2011.06.010
- APR. (2018). Preguntas Frecuentes: Agua Potable Rural. Retrieved from http://www.doh.gov.cl/APR/Paginas/Detalle_faq.aspx?item=11
- Aranda, P. (2017). *Marco Regulatorio de los Derechos de Aprovechamiento de las Aguas en Chile* Lecture on Water, for Engineering Students. Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile.
- Arellano, A. (2013). La historia del discreto empresario que se transformó en el zar de las aguas en Chile. <https://ciperchile.cl/2013/12/10/la-historia-del-discreto-empresario-que-se-transformo-en-el-zar-de-las-aguas-en-chile/>
- Arellano, A. (2017). El negocio de la sequía: el puñado de empresas de camiones aljibe que se reparte \$92 mil millones. <https://ciperchile.cl/2017/03/21/el-negocio-de-la-sequia-el-punado-de-empresas-de-camiones-aljibe-que-se-reparte-92-mil-millones/>
- Arellano, J. P. (1985). Social Policies in Chile: an Historical Review. *Journal of Latin American Studies*, 17(2), 397-418.
- Armitage, D., Berkes, F., & Doubleday, N. (2007). Adaptive Co-Management. Collaboration, Learning, and Multi-Level Governance. .
- Avendaño, O. (2014). Los partidos frente a la cuestión agraria en Chile, 1967-1973. *Política*, 52(1), 93-122.
- Bachelet, M. (2014). *Instructivo Presidencial* Retrieved from <http://www.guiadigital.gob.cl/recurso-documento/instructivo-presidencial-de-participacion-ciudadana-ndeg-002-2011.html>
- Bakhtin, M. M. (1986). *Speech Genres and Other Late Essays*: University of Texas Press.
- Bakker, K. (2010). *Privatizing Water: Governance Failure and the World's Urban Water Crisis*. USA: Cornell University Press.
- Bauer, C. (1997). Bringing Water Markets Down to Earth: The Political Economy of Water Rights in Chile, 1976-95. *World Development*, 25(5), 639-656.
- Bauer, C. (2004). *Siren Song. Chilean Water Law as a Model for International Reform* Washington, DC. : Resources for the future.
- BCN. (2013). Guía legal sobre: Elección popular de consejeros regionales. Retrieved from <https://www.bcn.cl/leyfacil/recurso/eleccion-popular-de-consejeros-regionales>
- BCN. (2015). Reportes Estadísticos Comunes 2015. Retrieved from https://reportescomunales.bcn.cl/2015/index.php/La_Serena/Sociales
- BCN. (2017). Estadísticas Territoriales. Retrieved from <https://www.bcn.cl/siit/estadisticasterritoriales>
- Beresford, P. (2013). From 'other' to involved: user involvement in research: an emerging paradigm. *Nordic Social Work Research*, 3(2), 9.
- Berkes, F. (2007). Understanding uncertainty and reducing vulnerability: lessons from resilience thinking. *Natural Hazards*, 41. doi:10.1007/s11069-006-9036-7
- Bisaillon, L. (2012a). An Analytic Glossary to Social Inquiry Using Institutional and Political Activist Ethnography. *International Journal of Qualitative Methods*, 11(5), 607-627.

- Bisaillon, L. (2012b). *Cordon Sanitaire or Healthy Policy? How Prospective Immigrants with HIV are Organized by Canada's Mandatory HIV Screening Policy*. (Degree of Doctorate of Philosophy in Population Health), University of Ottawa, Ottawa.
- Bisaillon, L., & Rankin, J. M. (2013). Navigating the Politics of Fieldwork Using Institutional Ethnography: Strategies for Practice. *Qualitative Social Research*, 14(1).
- Botes, L., & Van Rensburg, D. (2000). Community participation in development: nine plagues and twelve commandments. *Community Development Journal*, 35(1), 18.
- Braun, R. (2010). Social participation and climate change. *Environment, Development and Sustainability*, 12, 777–806. doi:10.1007/s10668-009-9224-1
- Bryant, R. L. (2015). *The International Handbook of Political Ecology*. Great Britain: Edward Elgar Publishing, Inc.
- Bryant, R. L., & Jarosz, L. (2004). Ethics in Political Ecology: A special issue of Political Geography. *Political Geography*, 23(7), 807–812. doi:10.1016/j.polgeo.2004.05.010
- Budds, J. (2004). Power, nature and neoliberalism: The political ecology of water in Chile. *Singapore Journal of Tropical Geography*, 25(3), 322–342.
- Calcagni, M., & Cabaña, G. (2013). *RESCATANDO LA GESTIÓN COMUNITARIA DE RECURSOS NATURALES: Un estudio de los comités de Agua Potable Rural en Chile*. (Título profesional de Sociólogo), Pontificia Universidad Católica de Chile, Santiago de Chile.
- Campbell, M. L. (2001). Textual accounts, ruling action: the intersection of knowledge and power in the routine conduct of community nursing work. *Studies in Cultures, Organizations and Societies*, 7(2), 231–250. doi:10.1080/10245280108523559
- Campbell, M. L., & Gregor, F. (2002). *Mapping Social Relations: A Primer in Doing Institutional Ethnography*. Canada: Rowman Altamira.
- CAPDDR. (2014). *Informe Comisión Asesora Presidencial en Descentralización y Desarrollo Regional: Hacia un país desarrollado y justo*.
- Carey. (2016). *Proyecto de Reforma al Código de Aguas*. Carey Retrieved from <http://reformacodigodeaguas.carey.cl/>
- Carlsson, L., & Berkes, F. (2005). Co-management: concepts and methodological implications. *J Environ Manage*, 75, 65–76. doi:10.1016/j.jenvman.2004.11.008
- Chant, S. (2014). Exploring the “feminisation of poverty” in relation to women’s work and home-based enterprise in slums of the Global South. *International Journal of Gender and Entrepreneurship*, 6(3), 20.
- Chapin III, F. S., Sommerkorn, M., Robards, M. D., & Hillmer-Pegram, K. (2015). Ecosystem stewardship: A resilience framework for arctic conservation. *Global Environmental Change*, 34, 207–217. doi:10.1016/j.gloenvcha.2015.07.003
- Chen, C., MacLeod, J., & Neimanis, A. (2013). *Thinking with Water*. Montreal & Kingston, London, Ithaca: McGill-Queen's University Press.
- Coombes, B., Johnson, J. T., & Howitt, R. (2012). Indigenous geographies I: Mere resource conflicts? The complexities in Indigenous land and environmental claims. *Progress in Human Geography*, 36(6), 810–821. doi:10.1177/0309132511431410
- Daniele, L., Cannatelli, C., Buscher, J. T., & Bonatici, G. (2019). Chemical composition of Chilean bottled waters: Anomalous values and possible effects on human health. *Science of the Total Environment*, 526–533. doi:10.1016/j.scitotenv.2019.06.165
- De la Maza, M., Lima, M., Mserve, P., Guitierrez, J., & Jaksic, F. (2009). Primary production dynamics and climate variability: ecological consequences in semiarid Chile. *Global Change Biology*, 15, 1116–1126. doi:10.1111/j.1365-2486.2008.01796.x

- Decoop. (2016). APR: A las puertas de la ley que proteja los únicos derechos de agua [Press release]. Retrieved from <http://www.decoopchile.cl/apr-a-las-puertas-de-la-ley-que-proteja-los-unicos-derechos-de-agua/>
- Decoop. (2017). Entrevista a Gloria Alvarado, Presidenta de FENAPRU Chile. Retrieved from <http://www.decoopchile.cl/entrevista-a-gloria-alvarado-presidenta-de-fenapru-chile/>
- DeVault, M. L. (1991). *Feeding the Family: The Social Organization of Caring as Gendered Work*. Chicago and London: The University of Chicago Press.
- DeVault, M. L. (2006). What is Institutional Ethnography? *Social Problems*, 53(3), 6.
- DeVault, M. L., & McCoy, L. (2006). Institutional Ethnography: Using Interviews to Investigate Ruling Relations. In D. Smith (Ed.), *Institutional Ethnography as Practice*. United States of America: Rowman & Littlefield
- Deveau, J. L. (2009). Examining the Institutional Ethnographer's Toolkit. *Socialist Studies/Études Socialistes*, Fall 2008, 1-20. doi:<http://dx.doi.org/10.18740/S4F60Z>
- Deveau, J. L. (2016). Using institutional ethnography's ideological circle to portray how textually mediated disability discourse paralysed a Supreme Court of Canada ruling. *Culture and Organization*, 22(4), 20. doi:10.1080/14759551.2014.940042
- DGA. (2018). *Proyecto de ley que reforma el Código de Aguas (Boletín N° 7543-12)*. Retrieved from http://www.dga.cl/Documents/Boletin7543-12enero_2018.pdf
- Diamond, T. (1992). *Making Gray Gold: Narratives of nursing home care*. Chicago: University of Chicago Press.
- DiarioUCHile. (2016). Organizaciones critican nuevo sistema de medición de pobreza. *Nacional*. Retrieved from <https://radio.uchile.cl/2016/01/04/organizaciones-critican-nuevo-sistema-de-medicion-de-pobreza/>
- DIPRES. (2019). *Ley de Presupuesto*. DIPRES Retrieved from http://www.dipres.gob.cl/597/w3-multipropertyvalues-15145-24532.html#ley_programa
- Dobson, A. (2007). *Green Political Thought*. London: Routledge.
- Dobson, S. (2001). Introduction: Institutional Ethnography as Method. *Studies in Cultures, Organizations and Societies*, 7(2), 147-158. doi:10.1080/10245280108523556
- DOH. (2015). *Programa Agua Potable Rural: 1964-2015*. MOP
- DOH. (2016). *Informe de Sistematización: Resultados compromiso PMG enfoque de género Programa de Agua Potable Rural*.
- DOH. (2017). *Boletín Informativo Cada Gota Suma: Inauguraciones y primeras piedras Jornadas de Difusión de la Ley 20.998 de Servicios SSR Talleres de Formación*. Chile: MOP Retrieved from [http://www.doh.gov.cl/APR/Genero/Boletin/Quinta%20Edici%C3%B3n%20de%20Cada%20Gota%20Suma%20\(Marzo%202017\).pdf](http://www.doh.gov.cl/APR/Genero/Boletin/Quinta%20Edici%C3%B3n%20de%20Cada%20Gota%20Suma%20(Marzo%202017).pdf)
- DOH. (2019a). Acerca del Programa APR. Retrieved from <http://www.doh.gov.cl/APR/AcercadeAPR/Paginas/acercaAPR.aspx>
- DOH. (2019b). Beneficiarios(as). Retrieved from <http://www.doh.gov.cl/APR/AcercadeAPR/Paginas/acercaAPR.aspx>
- DOH. (2019c). Fondos concursables a los que puede postular un servicio de APR. Retrieved from http://www.doh.gov.cl/APR/documentos/Documents/fondos_foncursables.pdf
- Dungumaro, E. W., & Madulun, N. F. (2003). Public participation in integrated water resources management: the case of Tanzania. *Physics and Chemistry of the Earth*, 28, 1009–1014. doi:10.1016/j.pce.2003.08.042
- Durán, G. (2015). Agua y pobreza en Santiago de Chile. Morfología de la inequidad en la distribución del consumo domiciliario de agua potable. *EURE*, 41(124), 225-246.

- Eastwood, L. E. (2006). Making the Institution Ethnographically Accessible. In D. Smith (Ed.), *Institutional Ethnography as Practice* (pp. 181-197). United States of America: Rowman & Littlefield
- Eastwood, L. E. (2019). *Negotiating the Environment: Civil Society, Globalisation and the UN*. London and New York: Routledge.
- Elmhirst, R. (2011). Introducing new feminist political ecologies. *Geoforum*, 42, 129–132. doi:10.1016/j.geoforum.2011.01.006
- Energy Saving Trust. (2013). *At Home With Water*. Retrieved from London: <https://www.energysavingtrust.org.uk/sites/default/files/reports/AtHomewithWater%287%29.pdf>
- Escenarios Hídricos 2030. (2018). *Radiografía del Agua: Brecha y Riesgo Hídrico en Chile*. Santiago, Chile: Fundación Chile
- FENAPRU. (2016a). FENAPRU Chile. Retrieved from <http://fenapruchile.cl/>
- FENAPRU. (2016b). Vision de FENAPRU Chile con respecto de la reforma al código de aguas.
- Fiebig-Wittmaack, M., Astudillo, O., Wheaton, E., Wittrock, V., Perez, C., & Ibacache, A. (2012). Climatic trends and impact of climate change on agriculture in an arid Andean valley. *Climatic Change*, 111, 819–833 doi:10.1007/s10584-011-0200-z
- Frêne, C., Ojeda, G., Santibáñez, J., Donoso, C., Sanzana, J., Molina, C., . . . Núñez-Ávila, M. (2014). Agua en Chile Diagnósticos territoriales y propuestas para enfrentar la crisis hídrica. 68.
- Fuentes, E., & Campusano, C. (1985). Pest outbreaks and rainfall in the semi-arid region of Chile. *Journal of Arid Environments*, 8(1), 67-72. doi:10.1016/S0140-1963(18)31338-7
- Fuster, R., Torres, P., Avendaño, K., DESCOOP, & Sanhueza, F. (2016). Estado del Arte y Desafíos en los Servicios Sanitarios Rurales.
- Gain, A. K., Rouillard, J. J., & Benson, D. (2013). Can Integrated Water Resources Management Increase Adaptive Capacity to Climate Change Adaptation? A Critical Review. *Journal of Water Resource and Protection*, 5, 11-20.
- Gordon, D. (2010). Poverty. In A. Walker, D. Gordon, R. Levitas, P. Phillimore, C. Phillipson, M. E. Salomon, & N. Yeates (Eds.), *The Peter Townsend Reader* (pp. 696). Bristol: Bristol University Press.
- Gordon, D., Levitas, R., Pantazis, C., Patsios, D., Payne, S., & Townsend, P. (2000). *Poverty and social exclusion in Britain*. York, UK: Joseph Rowntree Foundation.
- Grahame, P. R., & Grahame, K. M. (2009). Points of Departure: Insiders, Outsiders, and Social Relations in Caribbean Field Research. *Human Studies*, 32, 291–312. doi:10.1007/s10746-009-9121-5
- Gray, B. (1985). Conditions facilitating interorganizational collaboration. *Human Relations*, 38.
- Griffith, A. (2006). Constructing Single Parent Families for Schooling. In D. Smith (Ed.), *Institutional Ethnography as Practice* (pp. 127-138). United States of America: Rowman & Littlefield
- Griffith, A., & Smith, D. (2005). *Mothering for Schooling*. New York: RoutledgeFalmer.
- Griffith, A., & Smith, D. (2014). *UNDER NEW PUBLIC MANAGEMENT: INSTITUTIONAL ETHNOGRAPHIES OF CHANGING FRONT-LINE WORK*: University of Toronto Press.
- GWP. (2015). GWP in Action: 2015 Annual Report. In.
- GWP. (2016). What is IWRM? Retrieved from <http://www.gwp.org/en/The-Challenge/What-is-IWRM/>
- Hanson, A.-M. S. (2015). Women's ecological oral histories of recycling and development in coastal Yucatán. *Gender, Place & Culture*, 23(4), 467-483. doi:10.1080/0966369x.2015.1013445
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studie*, 14(3), 575-599.
- Harcourt, W., & Nelson, I. (2015). *Practising Feminist Political Ecologies: Moving Beyond the 'Green Economy'*. UK: Zed Books Ltd.

- Harris, L. (2009). Gender and emergent water governance: comparative overview of neoliberalized natures and gender dimensions of privatization, devolution and marketization. *Gender, Place & Culture*, 16(4), 387-408. doi:10.1080/09663690903003918
- Harris, L. (2015). Hegemonic Waters and Rethinking Natures Otherwise. In W. Harcourt & I. Nelson (Eds.), *Practising Feminist Political Ecologies: Moving Beyond the 'Green Economy'* (pp. 25). UK: Zed Books Ltd.
- Harris, L., & Gantt, W. (2007). Differential Effects of Privatization, Commodification, and Democratization. *GENDER AND SHIFTING WATER GOVERNANCE*, 9.
- Holling, C. S., & Meffe, G. K. (1996). Command and Control and the Pathology of Natural Resource Management. *Conservation Biology*, 10(2), 328-337.
- Howitt, R., Coombes, B., & Johnson, J. T. (2012). Indigenous geographies I: Mere resource conflicts? The complexities in Indigenous land and environmental claims. *Progress in Human Geography*, 36(6), 810–821. doi:10.1177/0309132511431410
- Howitt, R., & Suchet-Pearson, S. (2006). Rethinking Conceptual Blocks: Ontological pluralism and the idea of Management.
- INDAP. (2017a). A 50 AÑOS DE LA REFORMA AGRARIA. Retrieved from <http://www.indap.gob.cl/reforma-agraria>
- INDAP. (2017b, Jul7 2017). 50 anos Reforma Agraria. *Mundo Rural* 132.
- INDH. (2014). Informe misión de observación provincia de Petorca. 29.
- INN. (1984). *Norma chilena oficial 409/1.Of. 84*.
- Joy, K. J., Seema Kulkarni, Roth, D., & Zwarteven, M. (2014). Re-politicising water governance: exploring water re-allocations in terms of justice. *Local Environment*, 19(9), 954-973. doi:10.1080/13549839.2013.870542
- Kearney, G., Corman, M., Gormley, G., Hart, N., Johnston, J., & Smith, D. (2018). Institutional ethnography: a sociology of discovery—in conversation with Dorothy Smith. *Soc Theory Health*, 16, 292–306.
- Kepe, T. (2008). Land Claims and Comanagement of Protected Areas in South Africa: Exploring the Challenges. *Environmental Management*, 41, 311–321. doi:10.1007/s00267-007-9034-x
- Larraín, S. (2006). El agua en Chile: entre los derechos humanos y las reglas del mercado. Retrieved from Revues.org website: <http://polis.revues.org/5091> doi:10.4000/polis.5091
- Larraín, S. (2013). Acceso, protección y derecho humano al agua en Chile. Propuestas de Reformas Legales y Constitucionales.
- Larraín, S. (2017). *Presentacion al Instituto Nacional de Derechos Humanos, Reforma al Código de Aguas (Boletín 7543-12)*. Retrieved from <http://www.chilesustentable.net/wp-content/uploads/2017/09/Presentaci%C3%B3n-INDH-Codigo-de-Aguas-Sara-Larrain.pdf>
- Larraín, S., Aedo, M., Navarrete, K., & Villarroel, C. (2010). Marco jurídico para la gestión del agua en Chile: Diagnóstico y desafíos.
- Larrañaga, O. (2010). *El Estado Bienestar en Chile: 1910 - 2010*
- Litvak-Cooper, C. (2018). *Lone Mothers Living in Poverty in Chile: Hearing their voices*. (Doctor of Philosophy), University of Bristol University of Bristol
- Lostarnau, C., Oyarzun, J., Maturana, H., Soto, G., Senoret, M., Soto, M., . . . Oyarzun, R. (2011). Stakeholder participation within the public environmental system in Chile: major gaps between theory and practice. *J Environ Manage*, 92(10), 2470-2478. doi:10.1016/j.jenvman.2011.05.008
- Lubell, M., Henry, A. D., & McCoy, M. (2010). Collaborative institutions in an Ecology of Games. *American Journal of Political Science*, 54, 287–300.
- Lund, R. (2012). Publishing to become an “ideal academic”: An Institutional Ethnography and a Feminist Critique. *Scandinavian Journal of Management*, 28, 218—228.

- Madeiras, M., & Costa, J. (2006). POVERTY AMONG WOMEN IN LATIN AMERICA: FEMINIZATION OR OVER-REPRESENTATION? *International Poverty Centre, Working Paper* (20), 23.
- Marx, K., & Engels, F. (1965). *The Germany Ideology*. London: Lawrence & Wishart.
- Mathivet, c., & Pulgar, c. (2009). El Movimiento de Pobladores en Lucha, Santiago, Chile / The resurgence of the poblador movement in Santiago, Chile. *DPH: Dialogues, Proposals, stories for global citizenship*.
- Mehta, L., Alba, R., Bolding, A., Denby, K., Derman, B., Hove, T., . . . B., V. K. (2014). The politics of IWRM in Southern Africa. *International Journal of Water Resources Development*, 30(3), 528-542. doi:10.1080/07900627.2014.916200
- MIDESO. (2015a). *Ampliando la mirada sobre la pobreza y la desigualdad: Metodologías, diagnóstico y desafíos para Chile y sus territorios (2006-2015)*. MIDESO Retrieved from http://observatorio.ministeriodesarrollosocial.gob.cl/casen-multidimensional/casen/docs/AMPLIANDO_LA_MIRADA SOBRE_LA_POBREZA_Y_LA_DESIGUALDAD.pdf
- MIDESO. (2015b). *Metodología de formulación y evaluación de proyectos de agua potable rural (APR)*.
- MIDESO. (2015c). *Region de Coquimbo CASEN 2015*. Retrieved from <http://observatorio.ministeriodesarrollosocial.gob.cl/indicadores/docs/region/Coquimbo.pdf>
- MIDESO. (2016). *Metodología de medición de pobreza multidimensional con entorno y redes*. Serie Documentos Metodológicos Casen Retrieved from http://observatorio.ministeriodesarrollosocial.gob.cl/casen-multidimensional/casen/docs/Metodologia_de_Medicion_de_Pobreza_Multidimensional.pdf
- MIDESO. (2017). *REQUISITOS DE INFORMACION PARA POSTULACION DE INICIATIVAS DE INVERSION: SECTOR AGUA POTABLE Y ALCANTARILLADO SUBSECTOR AGUA POTABLE*. Retrieved from <http://sni.ministeriodesarrollosocial.gob.cl/evaluacion-iniciativas-de-inversion/evaluacion-ex-ante/requisitos-por-sector-para-formulacion-de-proyectos-nuevos-sectores/>
- MIDESO. (2018a). Informe de Desarrollo Social 2018. In (pp. 204).
- MIDESO. (2018b). *Registro Social de Hogares, Presentacion Power Point*.
- MIDESO. (2019a). ¿Qué es el Registro Social de Hogares? Retrieved from <http://www.registrosocial.gob.cl/que-es-el-registro-social/>
- MIDESO. (2019b). Requisitos por Sector para Formulación de Proyectos. Retrieved from <http://sni.ministeriodesarrollosocial.gob.cl/evaluacion-iniciativas-de-inversion/evaluacion-ex-ante/requisitos-por-sector-para-formulacion-de-proyectos-nuevos-sectores/>
- MIDESO. (2019c). *Valor de la Canasta Básica de Alimentos y Líneas de Pobreza: Informe Mensual*. Retrieved from http://observatorio.ministeriodesarrollosocial.gob.cl/layout/doc/ipc/Valor_CBA_y_LPs_19.01.pdf
- MIDESO, & DIPRES. (2018). *Normas, instrucciones y procedimientos para el proceso de inversión pública (NIP)*. Santiago de Chile
- Ministerio de Economía. (2004). *Decreto con Fuerza de Ley 5 Fija texto refundido, concordado y sistematizado de la ley general de cooperativas*. Retrieved from <https://www.leychile.cl/N?i=221322&f=2222-02-02&p=>
- Ministerio de Hacienda. (2018). *Ley 21125, Ley de Presupuestos del sector público correspondiente al año 2019*. Biblioteca del Congreso Nacional: Ministerio de Hacienda Retrieved from <https://www.leychile.cl/N?i=1127180&f=2019-01-25&p=>
- Ministerio de Justicia. (1981). *Decreto con Fuerza de Ley 1122. Fija Código de Aguas Modificado*. Retrieved from <https://www.leychile.cl/N?i=5605&f=2014-09-04&p=>
- Ley organica constitucional sobre gobierno y administracion regional, Ley 19175 C.F.R. (1992).

- Ministerio del Interior. (1997). *Ley 19418. Establece normas sobre juntas de vecinos y demas organizaciones comunitarias*. Chile Retrieved from <https://www.leychile.cl/N?i=30785&f=1996-12-01&p=>
- Ministerio del Interior. (2017). Ministerio del Interior y Seguridad Pública declara como Zona afectada por la Catástrofe a las comunas de las Regiones de Coquimbo y Valparaíso que indica; dispone las medidas de excepción que indica. In (25 September, 2017 ed., pp. 3). Diario Oficial de La Republica de Chile: Ministerio del Interior y Seguridad Publica.
- MINSAL. (1969). Decreto 735: Reglamento de los Servicios de agua destinados al Consumo Humano. In (pp. 13). Diario Oficial: Biblioteca del Congreso Nacional
- MINSEGPRES. (1980). *Constitucion Politica de la Republica de Chile*. Retrieved from <https://www.leychile.cl/N?i=242302&f=2017-01-05&p=>
- MINSEGPRES. (2014). *Regula el Lobby y las Gestiones que representen intereses particulares ante las autoridades y funcionarios*. Diario Oficial Republica de Chile Retrieved from <https://www.leychile.cl/Navegar?idNorma=1060115>
- Molle, F. (2009). River-basin planning and management: The social life of a concept. *Geoforum*, 40, 484–494.
- Molle, F., Mollinga, P. P., & Wester, P. (2009). Hydraulic Bureaucracies and the Hydraulic Mission: Flows of Water, Flows of Power. *Water Alternatives*, 2(3), 328-349.
- MOP. *Manual Aspectos Organizacionales de un Comité de Agua Potable Rural*. Retrieved from http://www.aprchile.cl/pdfs/Claves_de_la_Organizacion.pdf
- MOP. (1989). *Decreto con Fuerza de Ley 382. Ley General de Servicios Sanitarios*. Retrieved from <https://www.leychile.cl/N?i=5545&f=2014-10-10&p=>
- MOP. (2004). *Programa de Agua Potable Rural 40 Años de historia, salud y desarrollo para Chile: Historias de Agua, Mujer y Futuro*. Chile: Ministry of Public Works Retrieved from <http://www.doh.gov.cl/APR/documentos/Documents/Historiasagua%20mujer%20y%20futuro.pdf>
- MOP. (2015). *Resolucion 317*. Ministerio de Obras Publicas Ministerio de Obras Publicas Retrieved from https://www.mop.cl/participacion_ciudadana/Documents/Resolucion_SOP_317-2015_Unidad_Coordinadora_Participacion_Ciudadana.pdf
- MOP. (2017). *Ley 20998. Regula los Servicios Sanitarios Rurales*. Retrieved from <https://www.leychile.cl/N?i=1100197&f=2222-02-02&p=>
- Murray, O. (2018). *Doing Feminist Text-Focused Institutional Ethnography in UK Universities*. (Doctor in Philosophy), University of Edinburgh, Edinburgh.
- Musquiz, L. (2016, 16/11/2016). "En este proyecto de ley se ve un intento de expropiacion larvada". *El Mercurio*. Retrieved from <http://www.economiaynegocios.cl/noticias/noticias.asp?id=310581>
- Nadasdy, P. (2003). Reevaluating the Co-Management Success Story. *Arctic*, 56(4).
- Nadasdy, P. (2016). First Nations, Citizenship, and Animals, or Why Northern Indigenous People Might Not Want to Live in Zoopolis. *Canadian Journal of Political Science*, 49(1), 1-20. doi:<https://doi.org/10.1017/S0008423915001079>
- Nagar, R., Lawson, V., McDowell, L., & Hanson, S. (2002). Locating Globalization: Feminist (Re)readings of the Subjects and Spaces of Globalization. *Economic Geography*, 78(3), 257-284.
- Naples, N. A. (1997). The "New Consensus" on the Gendered "Social Contract": The 1987-1988 U.S. Congressional Hearings on Welfare Reform. *Signs*, 22(4), 907-945.
- O'Faircheallaigh, C. (2010). Public participation and environmental impact assessment: Purposes, implications, and lessons for public policy making. *Environmental Impact Assessment Review*, 30.
- Olsson, P., Folke, C., & Berkes, F. (2004). Adaptive Comanagement for Building Resilience in Social–Ecological Systems. *Environmental Management*, 34(1), 75–90.


- Ongsakul, R., Resurreccion, B., & Sajor, E. (2012). Normalizing Masculinities in Water Bureaucracy in Thailand. *International Journal of Public Administration*, 35(9), 577-586. doi:10.1080/01900692.2012.661177
- Peet, J. L. (2014). *An Institutional Ethnography of Aboriginal Australian Child Separation Histories: Implications of Social Organising Practices in Accounting for the Past*. (Doctor of Philosophy), University of Edimburgh, Edimburgh.
- Perramond, E. P. (2012). The Politics of Scaling Water Governance and Adjudication in New Mexico. *Water Alternatives*, 5(1), 62-82.
- Perreault, T. (2014). What kind of governance for what kind of equity? Towards a theorization of justice in water governance. *Water International*, 39(2), 233-245. doi:10.1080/02508060.2014.886843
- Perspectiva, C. (2011). *Informe Final: Participación y Género en los Comités y Cooperativas de Agua Potable Rural*.
- Pratt, K. (2012). Rethinking community: Conservation, practice, and emotion. *Emotion, Space and Society*, 5, 177-185. doi:10.1016/j.emospa.2011.08.003
- Rankin, J. (2001). Texts in action: how nurses are doing the fiscal work of health care reform. *Studies in Cultures, Organizations and Societies*, 7(2), 251-267. doi:10.1080/10245280108523560
- Rankin, J., & Campbell, M. (2006). *Managing To Nurse: Inside Canada's Healthcare Reform*. Toronto: University of Toronto Press.
- Rankin, J. M. (2014). DISCUSSION PAPER: The rhetoric of patient and family centred care: an institutional ethnography into what actually happens. *JAN Informing Practice and Policy worldwide through Research and Scholarship*.
- Rankin, J. M. (2017a). Conducting Analysis in Institutional Ethnography: Analytical Work Prior to Commencing Data Collection. *International Journal of Qualitative Methods*, 16, 1-9. doi:10.1177/1609406917734484
- Rankin, J. M. (2017b). Conducting Analysis in Institutional Ethnography: Guidance and Cautions. *International Journal of Qualitative Methods*, 16, 1-11. doi:10.1177/1609406917734472
- Rivera, D., Godoy-Faúndez, A., Lillo, M., Alvez, A., Delgado, V., Gonzalo-Martín, C., . . . García-Pedrero, A. (2016). Legal disputes as a proxy for regional conflicts over water rights in Chile. *Journal of Hydrology*, 535, 36-45.
- Rogers, P., & Hall, A. W. (2003). *Effective Water Governance* (1403-5324). Retrieved from
- Rouillard, J. J., Benson, D., & Gain, A. K. (2014). Evaluating IWRM implementation success: are water policies in Bangladesh enhancing adaptive capacity to climate change impacts? *International Journal of Water Resources Development*, 30(3), 515-527. doi:10.1080/07900627.2014.910756
- Santa Cruz Declaration on the Global Water Crisis. (2014). *Water International*, 39(2), 246-261. doi:10.1080/02508060.2014.886936
- Schmid, H. J. (2000). *English Abstract Nouns as Conceptual Shells: From Corpus to Cognition*. Berlin: De Gruyter Mouton.
- SENDOS. (1984). *Programa Rural Normas de Diseno*.
- SISS. (2017). Historia del sector sanitario en Chile. Retrieved from <http://www.siss.gob.cl/577/w3-article-3681.html>
- Smith, D. (1974a). The Social Construction of Documentary Reality. *Sociological Inquiry*, 44(4), 257-268.
- Smith, D. (1974b). Women's Perspective as a Radical Critique of Sociology. *Sociological Inquiry*, 44(1), 7-13. doi:10.1111/j.1475-682X.1974.tb00718.x
- Smith, D. (1975). What It Might Mean to Do a Canadian Sociology: The Everyday World as Problematic. *The Canadian Journal of Sociology*, 1(3), 363-376. doi:137.222.164.183
- Smith, D. (1987). *The everyday world as problematic : a feminist sociology*. Boston: Northeastern University Press

- Smith, D. (1990a). *The conceptual practices of power: A Feminist Sociology of Knowledge*. Toronto: University of Toronto Press.
- Smith, D. (1990b). *Texts, Facts, and Femininity: Exploring the Relations of Ruling*: Routledge.
- Smith, D. (1996). Telling the Truth after Postmodernism. *Symbolic Interaction*, 19(3), 171 -202.
- Smith, D. (1997). Comment on Hekman's "Truth and Method: Feminist Standpoint Theory Revisited". *Signs*, 22(2), 392-398.
- Smith, D. (1999). *Writing the Social: Critique, Theory, and Investigations*. Toronto: University of Toronto Press.
- Smith, D. (2001). Texts and the ontology of organizations and institutions. *Studies in Cultures, Organizations and Societies*, 7(2), 159-198. doi:10.1080/10245280108523557
- Smith, D. (2005a). *Institutional Ethnography: A Sociology for People*. Oxford, UK.: Altamira Press.
- Smith, D. (2005b). Knowing the Social. In *Institutional Ethnography: A Sociology for People* (pp. 27-45). Oxford, UK.: Altamira Press.
- Smith, D. (2005c). Power, Language and Institutions. In *Institutional Ethnography: A Sociology for People* (Vol. Chapter 9, pp. 183-201). Oxford, UK.: Altamira Press.
- Smith, D. (2005d). Texts, Text-Reader Conversations, and Institutional Discourse. In *Institutional Ethnography: A Sociology for People* (pp. 101-122). Oxford, UK: Altamira Press.
- Smith, D. (2005e). Women's Standpoint. In *Institutional Ethnography: A Sociology for People* (pp. 7-26). Oxford, UK.: Altamira Press.
- Smith, D. (2005f). Work Knowledges. In *Institutional Ethnography: A Sociology for People* (pp. 145-164). Oxford, UK.: Altamira Press.
- Smith, D. (2006). *Institutional Ethnography as Practice*. United States of America: Rowman & Littlefield
- Smith, D. (2014). Discourse as Social Relations: Sociological Theory and the Dialogic of Sociology. In D. Smith & S. Turner (Eds.), *Incorporating Texts into Institutional Ethnographies* (pp. 27). Toronto: University of Toronto Press.
- Smith, D., & Turner, S. M. (2014). Introduction. In D. Smith & S. M. Turner (Eds.), *Incorporating Texts into Institutional Ethnographies* (pp. 3-14). Toronto: University of Toronto Press.
- Strang, V. (2016). Dichotomies: Yes We Need Them, But Not as Much as We Think. *Anthropological Forum*, 26(4), 430-434. doi:10.1080/00664677.2016.1246084
- Suarez-Delucchi, A. A. (2018). At-home ethnography": Insider, outsider and social relations in rural drinking water management in Chile. *Journal of Organizational Ethnography*, 7(2), 199-211. doi:10.1108/JOE-12-2017-0072
- SUBDERE. (2009). *Manual de Soluciones de Saneamiento Sanitario para Zonas Rurales*. Retrieved from <http://www.subdere.gov.cl/sites/default/files/documentos/manual.pdf>
- SUBDERE. (2019). Quienes Somos. Retrieved from <http://www.subdere.gov.cl/organizaci%C3%B3n/quienes-somos>
- Sultana, F. (2011). Suffering for water, suffering from water: Emotional geographies of resource access, control and conflict. 42, 163–172. doi:10.1016/j.geoforum.2010.12.002
- Swayamprakash, R. (2014). Exportable engineering expertise for 'Development': a story of large dams in post independence India. *Water History*, 6, 153–165. doi:10.1007/s12685-013-0086-y
- The World Bank. (2006). Gender Equality as Smart Economics: A World Bank Group Gender Action Plan (Fiscal years 2007–10). 33.
- Truelove, Y. (2011). (Re-)Conceptualizing water inequality in Delhi, India through a feminist political ecology framework. *Geoforum*, 42, 143–152. doi:10.1016/j.geoforum.2011.01.004
- Turner, S. M. (2001). Texts and the institutions of municipal government: The power of texts in the public process of land development1. *Studies in Cultures, Organizations and Societies*, 7(2), 297-325. doi:10.1080/10245280108523562

- Turner, S. M. (2003). *Municipal planning, land development and environmental intervention: an Institutional Ethnography*. University of Toronto,
- Ugarte, M. (2019). *Normative worlds clashing: State planning, Indigenous self-determination, and the possibilities of legal pluralism in Chile*. (Doctor of Philosophy), THE UNIVERSITY OF BRITISH COLUMBIA, Vancouver. Retrieved from <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0377642>
- UN. (1992). *International conference on water and the environment. Development issues for the 21st Century*. Dublin, Ireland
- UN. (2010). Resolution 64/292. The human right to water and sanitation.
- United Nations. (1998). STATEMENT OF COMMITMENT FOR ACTION TO ERADICATE POVERTY ADOPTED BY ADMINISTRATIVE COMMITTEE ON COORDINATION [Press release]. Retrieved from <https://www.un.org/press/en/1998/19980520.eco5759.html>
- Villarroel, C. (2013). Asociaciones comunitarias de agua potable rural en Chile: Diagnóstico y desafíos. In T. M. Sara Larraín (Ed.): Grafica Andes Ltda.
- Wagner, K. (2014). Certifying Organic Farming on Vancouver Island. In D. Smith & S. M. Turner (Eds.), *Incorporating Texts into Institutional Ethnographies* (pp. 41-63). Toronto: University of Toronto Press.
- Walby, K. (2005). Institutional Ethnography and Surveillance Studies: An Outline for Inquiry. *Surveillance & Society*, 3(2/3), 158-172.
- Walker, R. (2014). *The Shame of Poverty*: Oxford University Press.
- Watts, M. J. (2015). Now and Then: The origins of political ecology and the rebirth of adaptation as a form of thought. In T. Perreault, G. Bridge, & J. McCarthy (Eds.), *The Routledge Handbook of Political Ecology* (First Edition ed., pp. 31). New York: Routledge.
- Wegerich, K., & Warner, J. (2010). *The Politics of Water: A Survey*. London and New York: Routledge.
- Williams, S., & Carriger, S. (2006). *Water and Sustainable Development: Lessons from Chile*. Retrieved from Stockholm, Sweden: <http://dlc.dlib.indiana.edu/dlc/handle/10535/5024>
- Wisner, B. (2015). Speaking Truth to Power: A personal account of activist political ecology. In T. Perreault, G. Bridge, & J. McCarthy (Eds.), *The Routledge Handbook of Political Ecology* (First Edition ed., pp. 10). New York: Routledge.
- Wondolleck, J., & Yaffee, S. L. (2000). *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Washington, D.C.: Island Press.
- World Bank, & MIDESO. (2018). *Registro Social de Hogares de Chile*.
- World Health Organization. (2019). Water sanitation hygiene. Retrieved from https://www.who.int/water_sanitation_health/emergencies/qa/emergencies_qa5/en/
- Yale, T. L. J. (1963). The Chilean Land Reform: A Laboratory for Alliance-for-Progress Techniques. *The Yale Law Journal*, 73(2), 310-333.
- Yongmie, N. J. (2012). Psycho-social dimensions of poverty: When poverty becomes shameful. *Critical Social Policy*, 33(3), 17.
- Zavala-Zunino, H., Trigos-Agüero, H., Munizaga-Antequera, I., & Mall-Rojas, E. (2008). Hidrología Cuenca Río Elqui. In *Institutional adaptations to climate change: Comparative study of dryland river basins in Canada and Chile* (Vol. Master of Science in Water Resources). La Serena: Universidad de La Serena.

Appendices

Appendix One: 52b Contract



ORD. DOH N° 61394

ANT.: No Tiene.

MAT.: Convenio 52Bis Aguas del Valle S.A.

INC.: -Tres (03) copias de Convenio 52Bis
entre Comité [redacted] y
empresa sanitaria Aguas del Valle S.A.

La Serena, **12 JUN. 2015**

DE : DIRECTOR REGIONAL DE OBRAS HIDRÁULICAS
REGIÓN DE COQUIMBO

A : COMITE APR [redacted]
REGIÓN DE COQUIMBO

Junto con saludarle, mediante el presente hago entrega a Ud. de tres copias de Contrato Especial de Abastecimiento de Agua Potable emitido por la empresa sanitaria Aguas del Valle S.A., el cual debe ser firmado por el comité de Agua Potable Rural [redacted], Comuna La Serena, y, por la otra parte, Aguas del Valle S.A.

Cabe señalar que el presente convenio establece la entrega de un caudal de 18,3 litros por segundo de agua para el abastecimiento del sistema de Agua Potable Rural de [redacted] Comuna La Serena.


Sin otro particular y esperando una favorable acogida a lo presente, saluda atentamente,

[redacted]

AAA [redacted]

DISTRIBUCION:
Sr. Eduardo Lara Cornejo – Secretaría Regional Ministerial de Desarrollo Social
Subdirección de Gestión y Desarrollo - Dirección Reg. de Obras Hidráulicas.
Oficina de Parte DOH.

Proceso N°: 8881681/

 DIRECCIÓN REGIONAL DE OBRAS HIDRÁULICAS
Región de Coquimbo - P.O. Box 5100 - La Serena

CONTRATO ESPECIAL DE ABASTECIMIENTO DE AGUA POTABLE

En La Serena, a 01 de junio de 2015, entre **AGUAS DEL VALLE S. A.**, o «la empresa», representada por su Gerente General don **José Luis Murillo Collado**, cédula de identidad y rol único tributario número 21.133.842-3, ambos domiciliados en calle Colo Colo 935, La Serena, y el **COMITÉ AGUA POTABLE RURAL** [redacted] rol único tributario número [redacted] en adelante también «el interesado», representado por doña [redacted] chilena, cédula nacional de identidad y rol único tributario número [redacted] ambos domiciliados en calle principal sin número, sector [redacted] comuna de La Serena, se ha convenido la celebración del siguiente contrato especial de abastecimiento de agua potable:

PRIMERO: El interesado solicitó a Aguas del Valle S. A. el otorgamiento de servicio especial de abastecimiento de agua potable para las 980 viviendas unifamiliares construidas y por construir que componen el Comité Agua Potable Rural Bellavista Ceres y que se ubican en predios del sector [redacted]. Los terrenos mencionados se encuentran fuera de los límites del área de concesión de Aguas del Valle S. A., razón por la cual no es posible otorgar la factibilidad solicitada.

SEGUNDO: Sin perjuicio de lo anterior, considerando que el sector se ubica en el área rural de la comuna de Coquimbo, de acuerdo a certificado municipal número 04-358 de fecha 11 de Marzo de 2015 y conforme con lo dispuesto en el artículo 52 bis de la Ley General de Servicios Sanitarios, Aguas del Valle S. A. se encuentra en condiciones de proveer el suministro especial de agua requerido por el interesado para las 980 viviendas mencionadas en la cláusula precedente, hasta por un caudal máximo instantáneo de 18,3 (dieciocho comas tres) litros por segundo, siempre que ello no signifique un perjuicio para los clientes del área de concesión de la comuna de La Serena. Se deja sin efecto el convenio suscrito en el año 2000 con la Empresa de Servicios Sanitarios de Coquimbo-ESSCO, por un caudal de 14 litros por segundo.

TERCERO: El abastecimiento de agua se otorgará en la forma y condiciones establecidas en este documento, quedando en todo caso sujeto dicho abastecimiento a que ello no implique un perjuicio para los clientes regulados del servicio, en términos de que, ante una eventual insuficiencia de agua, Aguas del Valle S. A. debe privilegiar el abastecimiento de sus clientes regulados, sin que de ello se pueda originar ningún tipo de responsabilidad para Aguas del Valle S. A., como tampoco puede dar lugar a demandar ningún tipo de indemnización, por concepto alguno, por parte del interesado.

Tampoco podrán originar responsabilidad para Aguas del Valle S. A. ni derecho a demandar indemnización por parte del interesado las suspensiones temporales que se produzcan del servicio de suministro de agua potable programadas o no programadas, y que ocurran a propósito de roturas de ductos, labores o trabajos de mantenimiento de los ductos o de instalaciones sanitarias o por acciones programadas relacionadas con la conexión de nuevos clientes o, en general, a propósito de cualesquiera de las causas, eventos o actividades que provocan la suspensión del servicio respecto de los clientes regulados.

Además, se deja expresa constancia que, de acuerdo con la solicitud de suministro de agua del interesado a Aguas del Valle S. A., el agua requerida por el interesado y que se entregará en virtud del presente contrato de abastecimiento está destinada a consumo humano o del tipo doméstico.

CUARTO: Mediante el presente instrumento, Aguas del Valle S. A. y el interesado celebran un convenio en virtud del cual Aguas del Valle S. A. se compromete a proveer abastecimiento de agua para las viviendas mencionadas en la cláusula primera, bajo los términos y condiciones especiales que se establecen en este documento.

QUINTO: El punto único de conexión a las redes de Aguas del Valle S. A. para las 980 viviendas se mantiene en la derivación de los acueductos nuevo y antiguo de recinto Punta Piedra ubicado en sector Aeródromo La Serena, Ruta 41 La Serena, Vicuña, comuna de La Serena, específicamente en el punto que determina el Departamento Técnico de Aguas del Valle S. A., punto que deberá ser solicitado por el interesado con la debida anticipación.

El interesado se obliga a diseñar, financiar, construir e inspeccionar, a su entero cargo y costo, la obra de refuerzo de la habilitación hidráulica de 2 sondajes (N°6 y N°7) en el sector Las Rojas del sistema de captación de La Serena.

Aun cuando las obras indicadas en esta cláusula sean construidas y financiadas por el interesado, las partes precisan que Aguas del Valle S. A. podrá inspeccionarlas y efectuar las observaciones que estime pertinentes en cuanto a su ejecución y emplazamiento, con el objeto de permitir su mejor uso en relación con el abastecimiento del proyecto. En todo caso, los proyectos deberán ser aprobados por Aguas del Valle S. A. y deberán cumplir con los estándares definidos por la empresa para estos efectos.

SEXTO: El interesado deberá presentar el proyecto de las obras señaladas en la cláusula quinta en Aguas del Valle S. A. Para la presentación del proyecto deberá solicitar instrucciones en el Departamento Técnico de la empresa. El proyecto deberá ser firmado por ingenieros civiles o por ingenieros de ejecución en obras sanitarias.

La construcción de las obras deberá ser ejecutada solo por personas naturales o jurídicas autorizadas por el Reglamento de Instalaciones Domiciliarias de Agua Potable y Alcantarillado.

Los proyectos, y posteriormente los planos de construcción de las obras, deberán acompañarse en un archivo magnético con el dibujo realizado en AutoCAD®.

SÉPTIMO: El inicio de las obras sanitarias deberá efectuarse con posterioridad a la aprobación de los proyectos correspondientes por parte de Aguas del Valle S. A.

Aguas del Valle S. A. podrá suspender la ejecución de las obras del proyecto si las condiciones técnicas que contiene difieren de lo real al llevarse a efecto los replanteos correspondientes.

OCTAVO: Las partes acuerdan que el precio que el interesado se obliga a pagar por el servicio sanitario de agua suministrado por Aguas del Valle S. A. será el equivalente al cargo fijo y a los cargos por producción de agua potable establecidos para el grupo tarifario del sistema de La Serena en los decretos tarifarios vigentes para el respectivo periodo, con la indexación que establece la normativa sanitaria, tarifa que el interesado pagará en la misma fecha que la fijada para los usuarios de ese grupo.

NOVENO: La medición del consumo para efectos del cobro del abastecimiento de agua se hará mediante un medidor de caudal conforme con los requerimientos técnicos que exija Aguas del Valle S. A., que el interesado tiene instalado en [REDACTED] Serena, [REDACTED] La Serena Vicuña, comuna de La Serena. Será obligación del interesado comunicar oportunamente a Aguas del Valle S. A. la instalación del medidor para su enrolamiento.

DÉCIMO: Las partes dejan constancia de que la operación, mantenimiento y reposición del sistema aguas abajo del punto de ubicación del medidor es de exclusiva responsabilidad del Comité Agua Potable Rural [REDACTED]. Mediante el presente convenio, el interesado libera expresa e irrevocablemente a Aguas del Valle S. A. de toda responsabilidad por la distribución, calidad y posterior consumo del agua a partir de dicho punto.

UNDÉCIMO: Las partes declaran que el abastecimiento de agua materia de este convenio tiene por único objeto dar servicio a las 980 viviendas del Comité Agua Potable Rural

[REDACTED] En consecuencia, el interesado se obliga a no distribuir, vender o entregar a terceros el agua suministrada de acuerdo con este instrumento.

DUODÉCIMO: Las partes declaran que los derechos de Aguas del Valle S. A. en relación con la gestión de facturación, recaudación y cobranza de los servicios prestados en virtud del presente convenio serán los establecidos en la Ley General de Servicios Sanitarios y su reglamento.

DECIMOTERCERO: El interesado se obliga a ejecutar las obras que origine este convenio en un plazo máximo de 24 meses desde su suscripción. En caso de incumplimiento, el presente convenio quedará sin efecto, liberando a las partes de las obligaciones establecidas en él.

DECIMOCUARTO: Los gastos notariales derivados de este contrato serán de cargo y costo del interesado.

DECIMOQUINTO: Las partes fijan su domicilio en la ciudad de Valparaíso para todos los efectos legales derivados de este contrato y prorrogan competencia para ante sus tribunales.

PERSONERÍAS: La personería de don José Luis Murillo Collado para representar a Aguas del Valle S.A. consta de la escritura pública de fecha 14 de enero de 2014, otorgada ante el Notario de Valparaíso don Alejandro Sepúlveda Valenzuela. La personería de [REDACTED] para representar al Comité Agua Potable Rural [REDACTED] de La Serena consta del certificado sin número de fecha 17 de diciembre del año 2014 de la Ilustre Municipalidad de La Serena. Los documentos mencionados no se insertan por ser conocidos por las partes.

[REDACTED]
Comité Agua Potable Rural [REDACTED] de La Serena

JOSÉ LUIS MURILLO COLLADO
Gerente General
Aguas del Valle S. A.

Appendix Two: Ficha IDI



REPORTE FICHA IDI PROCESO PRESUPUESTARIO 2017 POSTULA: EJECUCION



FECHA POSTULACIÓN SNI	: 25-11-2016	FECHA INGRESO SNI	: 25-11-2016
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1. PROYECTO: 30471833-0 MEJORAMIENTO SISTEMA APR EXISTENTE LA CHACRA, COMUNA DE CASTRO			
2. ETAPA ACTUAL	: PERFIL	3. SECTOR/SUBSECTOR	: AGUA POTABLE Y ALCANTARILLADO / AGUA POTABLE
4. DESCRIPTOR (S)	: AGUA POTABLE RURAL		
5. LOC. GEOGRÁFICA	: COMUNA DE CASTRO	6. Competencia de Análisis	: REGIONAL
7. DISTRITO	: 58	8. CIRCUNSCRIPCION	: XVII - LOS LAGOS
9. PROYECTO RELACIONADO	:		
10. PRIORIDAD (FUENTE)	: GENERAL	11. SEA	: NO CORRESPONDE
12. JUSTIFICACION DEL PROYECTO	EL M.O.P. A TRAVES DE LA D.O.H. DESARROLLA EL PROGRAMA DE AGUA POTABLE RURAL, CON EL OBJETIVO DE SOLUCIONAR EL PROBLEMA QUE AFECTA A LAS LOCALIDADES CON DEFICIENTE ABASTECIMIENTO DE AGUA POTABLE LOGRANDO MEJORAR LA CALIDAD DE VIDA DE LOS BENEFICIARIOS Y DISMINUIR LA TASA DE ENFERMEDADES ENTERICAS.		

13. DESCRIPCIÓN DE ACTIVIDADES A REALIZAR

ESTE PROYECTO CONTEMPLA OBRAS CIVILES PARA EL MEJORAMIENTO Y AMPLIACION DEL SISTEMA DE AGUA POTABLE RURAL EXISTENTE DE LA LOCALIDAD DE LA CHACRA, COMUNA DE CASTRO. SE CONSIDERA EL REFUERZO DE LA IMPULSION Y LA MODIFICACION DE LA RED DISTRIBUCION PARA MEJORAR LA PRESION DE SERVICIO EN LAS ZONAS ALTAS CON REFUERZOS DE RED EN PVC C-10 DE 180 MM. LA CAPTACION EXISTENTE CONTEMPLA MEJORAMIENTOS MENORES Y EL SISTEMA DE TRATAMIENTO SE DEBE ADECUAR A LA DEMANDA ACTUAL Y ESTANDARIZAR LA CASETA DE TRATAMIENTO SEPARANDO LAS OBRAS ELECTRICAS DE LA CLORACION. LA EJECUCION DE ESTA OBRA PERMITIRA CONTAR CON UN SISTEMA ADECUADO PARA ENTREGAR LA FACTIBILIDAD TECNICA PARA QUE LAS 75 FAMILIAS DEL SECTOR EN ESPERA DE ESTE SERVICIO PUEDAN CONTAR CON AGUA POTABLE EN FORMA EFICIENTE Y DE CALIDAD EN SUS HOGARES.

14. CORRESPONDE A UNA ADI	: NO
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NOMBRE ADI	TIPO
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15. GEOREFERENCIACION	: Pulse aquí para visualizar la georeferenciación
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16. SITUACIÓN	: NUEVA
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17. CALENDARIO DE FINANCIAMIENTO DE LA INVERSIÓN

FUENTE	ITEM	MONEDA	PAGADO AL 31-12-2016	SOLICITADO PARA 2017	SALDO POR INVERTIR	COSTO TOTAL
SECTORIAL	CONSULTORÍAS	M\$	0	43.460	12.022	55.482
SECTORIAL	OBRAS CIVILES	M\$	0	299.718	82.913	382.631
TOTAL		M\$	0	343.178	94.935	438.113

Moneda Presupuesto 2017

Tipo de Cambio: 707,34 \$/US\$

FECHA CREACIÓN SOLICITUD: 25-11-2016

FECHA ÚLTIMA MODIFICACIÓN: 12-04-2017

19. RESULTADO DEL ANÁLISIS TÉCNICO ECONÓMICO:

	RESULTADO DEL ANÁLISIS	FECHA DEL RESULTADO	USUARIO QUE ANALIZÓ
RS	RECOMENDADO FAVORABLEMENTE	25-11-2016	S.N.I. MINISTERIO DESARROLLO SOCIAL / DEPARTAMENTO DE INVERSIONES - MDS

20. OBSERVACIONES AL RESULTADO:

LA INICIATIVA MEJORARA EL SERVICIO DE APR DEL SECTOR LA CHACRA, COMUNA DE CASTRO. PERMITIRÁ UN MAYOR CONSUMO DE AGUA POTABLE Y UNA LIBERACIÓN DE RECURSOS AL ABASTECER DE ESTE ELEMENTO A UN COSTO MENOR, MEJORANDO LAS CONDICIONES DE VIDA DE LOS BENEFICIARIOS.

EL SISTEMA EXISTENTE FUE CONSTRUIDO EL AÑO 2002 CUANDO EL SECTOR ERA RURAL EN SU TOTALIDAD. FUE DISEÑADO PARA 75 ARRANQUES, CON UN ESTANQUE DE REGULACION DE 20 M3. ACTUALMENTE TIENE 208 USUARIOS CONECTADOS. ADEMAS, UNA PARTE DE LA CHACRA QUEDO DENTRO DEL LIMITE URBANO DE CASTRO.

DADO EL CRECIMIENTO DE LA POBLACION Y VIVIENDAS, Y LA CONEXIÓN DE UN NUMERO MAYOR DE USUARIOS, EL SISTEMA ACTUAL PRESENTA DEFICIENCIAS EN CUANTO A LA CALIDAD, CONTINUIDAD Y COBERTURA DEL SERVICIO, LO QUE HACE NECESARIO REALIZAR UN MEJORAMIENTO PARA INCORPORAR 75 NUEVOS USUARIOS QUE ACTUALMENTE NO CUENTAN CON EL SERVICIO Y OTORGAR UN SERVICIO ADECUADO A LOS USUARIOS EXISTENTES.

EL PROYECTO BENEFICIARA EN FORMA DIRECTA A 283 USUARIOS, 208 ANTIGUOS Y 75 NUEVOS, (72 VIV. Y 3 EQUIP. IGLESIA, SEDE DE JV Y POSTA). SI BIEN EXISTEN 166 CONSTRUCCIONES SIN CONEXIÓN AL SISTEMA, ESTE PROYECTO SOLO ABORDA LAS QUE ESTÁN EN EL SECTOR RURAL, EN CONSECUENCIA EXISTE UNA POBLACION POSTERGADA DE 79 USUARIOS UBICADOS EN EL SECTOR URBANO, QUE DEBERÁN RESOLVER SUS DEFICIT A TRAVES DE LA AMPLIACION DEL TERRITORIO OPERACIONAL DE LA SANITARIA. ADEMAS EXISTEN 12 CONSTRUCCIONES QUE CORRESPONDEN A VIVIENDAS DE VERANEO QUE QUEDARAN CON FACTIBILIDAD DE CONEXIÓN.

EN EL PROYECTO SE IDENTIFICARON 2 ALT. DE SOLUCIÓN, ELIGIENDOSE LA PRIMERA POR SU MENOR VAC: A) MEJORAMIENTO DEL SISTEMA AGREGANDO UN ESTANQUE SEMIENTERRADO DE 75 M3, PARA ABASTECER A UNA POBLACION DE DISEÑO DE 1.896 HABITANTES AL AÑO 20, CON VACS DE M\$349.229. B) MEJORAMIENTO DEL SISTEMA AGREGANDO UN ESTANQUE ELEVADO DE 75 M3, CON UN VACS DE M\$403.892.

LA IDI FUE EVALUADA CON ENFOQUE COSTO EFICIENCIA, Y EL COSTO/ARR ALCANZA A 42 UF, PARA 283 USUARIOS, VALOR QUE SE ENCUENTRA DENTRO DEL MONTO REFERENCIAL SEÑALADO EN LAS NIP.

LOS COSTOS DE OPERACIÓN ANUAL SERÁN CUBIERTOS DURANTE LOS 20 AÑOS DEL HORIZONTE DE EVALUACIÓN A TRAVÉS DE LA TARIFA DE AUTOFINANCIAMIENTO DEL SISTEMA. DURANTE EL PRIMER AÑO LOS COSTOS DE OPERACION Y MANTENCION ASCIENDEN A M\$5.839.-LA TARIFA CONSIDERA UN COSTO FIJO MENSUAL DE \$923 POR USUARIO MÁS \$85 POR M3.

SE USARON LOS SGTs. SUPUESTOS: 4 HAB/VIVIENDA, TASA CRECIMIENTO POBL. 2% ANUAL, DOTACIÓN 120 L/HAB/DÍA, Y COEF. CONSUMO MÁX. 1,5.

LA SOLICITUD DE FINANCIAMIENTO INCLUYE CONSULTORÍAS PARA LA AITO Y GASTOS ADMINISTRATIVOS PARA EL PROCESO DE LICITACION.

SEGÚN CERTIFICADO NRO.257 DGA DEL 24.08.2016, LOS DERECHOS DE AGUA SE ASEGURAN POR UN CAUDAL DE 12 LT/SEG PARA LO CUAL SE APLICARA LA GLOSA NRO. 6 DE LA LEY DE PRESUPUESTOS DEL AÑO 2016.

SERÁ RESPONSABILIDAD DE LA UNIDAD FINANCIERA DETERMINAR Y PACTAR CON LOS BENEFICIARIOS DEL PROYECTO QUE NO CORRESPONDEN A LA POBLACIÓN DE BAJOS RECURSOS PARA QUE APORTEN AL PROYECTO.

21. INSTITUCIONES QUE PARTICIPAN EN LA EJECUCIÓN DEL PROYECTO

Institución Responsable de la Etapa	AGUA POTABLE RURAL
Instituciones Financieras	AGUA POTABLE RURAL
Instituciones Técnicas	AGUA POTABLE RURAL

22. RESUMEN DE LOS RESULTADOS DEL PROYECTO EN LA ETAPA DE PERFIL

Fecha de la información: 05-08-2016 Magnitud del Proyecto: 75 NRO. DE ARRANQUES NUEVOS

Duración: 6 meses Vida útil: 20 años

Beneficiarios directos: Hombres: 589, Mujeres: 590, Ambos sexos: 1.179 Fecha de inicio del proyecto: 01-09-2017

Costo total inicial Proyecto: M\$ 399.482 Costo total modificado Proyecto: M\$ 438.113

Costo total licitación Proyecto: Costo total estimado Proyecto: M\$ 348.892

INDICADORES DE RESULTADO	
NOMBRE DEL INDICADOR	VALOR
VALOR ACTUALIZADO COSTOS INV. OPER. Y MANTEN.	349.229 M\$
COSTO ANUAL EQUIVALENTE	30.447 M\$

23. CALENDARIO DE INVERSIONES:

MEJORAMIENTO SISTEMA APR EXISTENTE LA CHACRA, COMUNA DE CASTRO

ITEM	APORTE DIRECTO M\$	1				2	
		S	O	N	D	E	F
OBRAS CIVILES	382.631						
CONSULTORIAS	55.482						
TOTAL APORTES DIRECTOS	438.113						

Moneda Presupuesto 2017

OTROS APORTES

FUENTE	APORTE INDIRECTO
TOTAL	M\$ 0

Moneda Presupuesto 2017

COSTO ETAPA PROGRAMADA

TOTAL	M\$ 438.113
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Moneda Presupuesto 2017

24. HISTORIAL PRESUPUESTARIO DEL PROYECTO PARA ETAPA EJECUCION:

A. SOLICITUDES DE FINANCIAMIENTO

AÑO IDI	RATE	PAGADO AÑOS ANTERIORES M\$	SOLICITADO AÑO		SALDO POR INVERTIR		COSTO TOTAL	
			(M\$)	(MUS\$)	(M\$)	(MUS\$)	(M\$)	(MUS\$)
2016	RS*		10.333		427.780		438.113	

Moneda Presupuesto 2017

B. EJECUCIÓN PRESUPUESTARIA


AÑO ASIGNACIÓN	FUENTE	RATE	ASIGNADO		PAGADO	
			(M\$)	(MUS\$)	(M\$)	(MUS\$)

Montos expresados en moneda del año de la asignación

25. FUNCIONARIO RESPONSABLE DE LA INFORMACION:

NOMBRE	INSTITUCIÓN	CARGO	FONO	CORREO ELECTRÓNICO
ANA MARIA TAY MALDONADO	AGUA POTABLE RURAL	FUNCIONARIA DEPTO. PROG. SANIT	6882386	ana.tay@mop.gov.cl

Appendix Three: RSH Survey

 Formulario de Ingreso al Registro Social de Hogares Ministerio de Desarrollo Social		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
DATOS (INFORMANTE)		
Nombres <input type="text"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
Apellido Paterno <input type="text"/>		
Apellido Materno <input type="text"/>		
Teléfono <input type="text"/>		
Correo electrónico <input type="text"/>		
LOCALIZACIÓN		
Calle / Avenida / Camino <input type="text"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
Número <input type="text"/>		
Bloque <input type="text"/>		
Departamento <input type="text"/>		
Sitio <input type="text"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
U/V <input type="text"/>		
Comuna <input type="text"/>		
Ciudad o Localidad <input type="text"/>		
Agrupación Habitacional <input type="text"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
Tipo de Agrupación <input type="text"/>		
N° Cliente Boleta Agua <input type="text"/>		
N° Cliente Boleta Luz <input type="text"/>		
VIVIENDA		
V1. Tipo de Vivienda <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
1. Casa 2. Departamento 3. Pieza dentro de la vivienda 4. Mejora, mediagua 5. Rancho, ruca o choza 6. Vivienda de desecho (plásticos, latas, etc.) 7. Otro tipo de vivienda (móvil, carpa, vagón, containers o similar) 8. Hospedería 9. Caleta o punto de calle 10. Vivienda colectiva 11. Residencial, pensión		
V2. Su Vivienda ¿Bajo qué situación ocupa el sitio? <input type="checkbox"/>		
1. Propio pagado o pagándose 2. Arrendado 3. Cedido, uso gratuito 4. Usufructo (solo uso y goce) 5. Ocupación irregular 6. Poseedor irregular		
V3. ¿Bajo qué situación ocupa la vivienda? <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
1. Propia pagada o pagándose 2. Arrendada 3. Cediada, uso gratuito 4. Usufructo (solo uso y goce) 5. Ocupación irregular		
V4. Fuente de agua <input type="checkbox"/>		
1. Red pública con medidor propio 2. Red pública con medidor compartido 3. Red pública sin medidor 4. Pozo o noria 5. Río, vertiente o estero 6. Otra fuente (no potable)		
V5. Distribución de agua <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
1. Con llave dentro de la vivienda 2. Con llave dentro del sitio, pero fuera de la vivienda 3. No tiene sistema, la acarrea		
V6. Sistema de baño <input type="checkbox"/>		
1. WC conectado a alcantarillado 2. WC conectado a fosa séptica 3. Cajón, letrina o WC, sobre pozón negro, acequia, canal u otro sistema 4. No tiene		
V7. N° de habitaciones que usan como dormitorios (excluyendo baño y cocina) <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
V8. Su Hogar <input type="checkbox"/>		
¿Es el principal ocupante de la vivienda o sitio? 1. Si 2. No		
Preguntas dirigidas a la Materialidad de la Vivienda Estado de conservación 1. Bueno 2. Aceptable 3. Malo		
V9. Materialidad de los muros <input type="checkbox"/> Estado <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
1. Hormigón armado 2. Albanilería (bloque cemento, piedra o ladrillo) 3. Tabique forrado por ambas caras (madera, lata u otro) 4. Tabique sin forro interior (madera u otro) 5. Adobe, barro, quincha, paja u otro artesanal tradicional 6. Materiales precarios o de desecho (cartón, latas, sacos, plásticos, etc.)		
V10. Materialidad de pisos <input type="checkbox"/> Estado <input type="checkbox"/>		
1. Parquet, madera, piso flotante o similar 2. Cerámico, flexit o similar 3. Alfombra o cubrepiso 4. Baldosa de cemento 5. Radier 6. Enchapado de cemento 7. Tierra		
V11. Materialidad de techos <input type="checkbox"/> Estado <input type="checkbox"/>		REGISTRO <div style="border: 1px solid black; width: 100px; height: 20px;"></div>
1. Tejas o rejuela (cerámica, metálica, cemento, madera, asfáltica) 2. Losa hormigón 3. Planchas metálicas (zinc, cobre, etc.) o fibrocemento (pizameño) 4. Forosita o plancha de fieltro entintado 5. Paja, colón, totora o caña 6. Materiales precarios o desecho 7. Sin cubierta en el techo		
REFERENCIAS Y/O OBSERVACIONES		
<div style="border: 1px solid black; height: 40px;"></div>		

PLANILLA AUXILIAR DE INGRESOS

Nº de integrante	Tipo de ingreso			Nº de integrante	Tipo de ingreso		
	Ingresos del trabajo	Jubilaciones, pensiones	Otros ingresos*		Ingresos del trabajo	Jubilaciones, pensiones	Otros ingresos*
Mes 1				Mes 1			
Mes 2				Mes 2			
Mes 3				Mes 3			
Mes 4				Mes 4			
Mes 5				Mes 5			
Mes 6				Mes 6			
Mes 7				Mes 7			
Mes 8				Mes 8			
Mes 9				Mes 9			
Mes 10				Mes 10			
Mes 11				Mes 11			
Mes 12				Mes 12			
TOTAL				TOTAL			

Nº de integrante	Tipo de ingreso			Nº de integrante	Tipo de ingreso		
	Ingresos del trabajo	Jubilaciones, pensiones	Otros ingresos*		Ingresos del trabajo	Jubilaciones, pensiones	Otros ingresos*
Mes 1				Mes 1			
Mes 2				Mes 2			
Mes 3				Mes 3			
Mes 4				Mes 4			
Mes 5				Mes 5			
Mes 6				Mes 6			
Mes 7				Mes 7			
Mes 8				Mes 8			
Mes 9				Mes 9			
Mes 10				Mes 10			
Mes 11				Mes 11			
Mes 12				Mes 12			
TOTAL				TOTAL			

*Otros ingresos tales como: 1. Arriendo de propiedad, máquina, automóvil o de algún otro bien que tenga.
2. Aportes que se reciben de algún familiar u otra persona que no vive con ud.
3. Por ingresos percibidos en periodos anteriores, que ingresan mensualmente a financiar gastos del hogar.

GESTIÓN DEL FORMULARIO

Código encuestador

Fecha de aplicación

Día Mes Año

Firma encuestador

Código supervisor comunal

Fecha supervisión comunal

Día Mes Año

Firma supervisor comunal

Código revisor

Fecha de revisión comunal

Día Mes Año

Firma de revisor comunal

DATOS DE PERSONAS DEL HOGAR									
Nº	RUN					DV	Apellido Paterno	Apellido Materno	Nombres
1						~			
2						~			
3						~			
4						~			
5						~			
6						~			
7						~			
8						~			
9						~			
10						~			

Códigos Parentesco				Códigos Pueblos indígenas			
1. Jefe(a) de hogar	5. Hijo(a) sólo del cónyuge o pareja	8. Yerno o Nuera	12. Otro familiar	0. No pertenece	3. Quechua	6. Cóys	
2. Cónyuge o pareja	6. Padre o Madre	9. Nieto(a)	13. No familiar	1. Aymara	4. Mapuche	7. Kawésqar	
3. Hijo(a) de ambos	7. Suegro o Suegra	10. Hermano(a)		2. Rapa-Nui	5. Atacameño	8. Yagán	
4. Hijo(a) sólo del Jefe(a) de hogar		11. Cuñado(a)				9. Diaguita	

Códigos Educación	
E1. Actualmente, ¿Esta persona asiste regularmente a algún establecimiento educacional?	1. Si (Para los que respondieron SI pasar a módulo Salud) 2. No
E2. ¿Por qué no asiste? o ¿Por qué no lo hace?	<div>1. No lo considera necesario</div> <div>2. Problemas de acceso (restricción de oferta)</div> <div>3. Problemas de traslado (vías, caminos, etc.)</div> <div>4. Problemas económicos</div> <div>5. Quehaceres del hogar o cuidados de otra persona</div> <div>6. Embarazo, maternidad, paternidad</div> <div>7. Enfermedad que lo(a) inhabilita</div> <div>8. Problemas familiares</div> <div>9. No le interesa</div> <div>10. Está trabajando</div> <div>11. Terminó de estudiar</div> <div>12. Otra razón</div>
E3. ¿Hasta qué curso llegó?	<div>E4. ¿En qué tipo de educación llegó hasta este curso?</div> <div>0. Ninguno</div> <div>1. Educación parvularia</div> <div>2. Educación básica</div> <div>3. Preparatoria (sistema antiguo)</div> <div>4. Educación media científica humanista</div> <div>5. Educación media técnico profesional</div> <div>6. Humanidades (sistema antiguo)</div> <div>7. Técnica, comercial, industrial o normalista (sistema antiguo)</div> <div>8. Centro de formación técnica incompleta</div> <div>9. Centro de formación técnica completa</div> <div>10. Instituto profesional incompleta</div> <div>11. Instituto profesional completa</div> <div>12. Educación universitaria incompleta</div> <div>13. Educación universitaria completa</div> <div>14. Postgrado</div> <div>15. Educación especial-diferencial</div>

> Continuación Códigos Ocupación

08. ¿Buscó trabajo remunerado en los últimos 2 meses? (Para los que respondieron NO en 01)	1. SI	2. No
--	-------	-------

09. ¿Por qué no buscó trabajo en los dos últimos meses?

6. Jubilado(a), Pensionado, montepiada
7. Rentista
8. Se aburrí de buscar
9. No tiene interés
10. Otra razón

07. ¿Cuántas horas a la semana trabaja?

¿Existe algún integrante del hogar que sea Extranjero y que se encuentre con visa en trámite o pendiente de regulación? **1. Si** **2. No**
En caso de responder Si completar los datos de estas personas en el Anexo de Formulario.

[illegible]

Declaro que la información proporcionada es verídica, verdadera y/o completa, y autorizo al Ministerio de Desarrollo Social para que la utilice, verifique y/o complemente administrativamente, de conformidad con la información con que cuenta, con la que puedan proveerle otros organismos públicos, con los datos que se consignen y con todos aquellos necesarios para efectos de su caracterización socioeconómica. Asimismo, autorizo al Ministerio el tratamiento de toda esta información de conformidad con lo dispuesto en el Decreto Supremo N° 22, de 2015, del Ministerio de Justicia, y N° 19,628, sobre Protección de la Vida Privada, y todas las demás normas aplicables.

Huellla informante

Appendix Four: Interviews and Participant Observation

I conducted 53 interviews within the local and extra-local settings between September 2017 and March 2018. Here I provide broad information about these interviews and the dates in which they were carried out. All participants are anonymous except for those who are public figures and whose names are in the press such as Jocelyn Lizana, Gloria Alvarado, Rodrigo Mundaca, Pablo Aranda, Fernando Peralta. I also provide broad information about the events I attended as a participant observant.

Interviews:

- APR Manager: 18th; 20th; 25th October; 8th November, 2017
- 5 APR Directors: 17th; 18th October 2017; 23rd November 2017
- 2 APR Admin team: 18th October 2017; 8th November, 2017
- 8 APR members: 19th; 20th October; 9th November 2017
- 4 Non-members of APR: 17th and 31st October 2017; 8th November, 2017
- Technical Inspector (ITO) from “Aguas del Valle”, Coquimbo Region: 30th October, 2017
- Treasurer of Canal Algarrobo, Coquimbo region: 25th October 2017
- APR Programme Director, Coquimbo Region: 30th October, 2017
- SISS Officer, Coquimbo region: 6th November, 2017
- Ex- President APR Limari, Coquimbo Region: 7th November, 2017
- Health Division, Coquimbo region, MINSAL: 8th November, 2017
- DGA Lawyer, Coquimbo: 10th November, 2017
- Leader of Community Development, APR Programme, Santiago: 13th November, 2017
- President of an APR in Limari, Coquimbo Region: 20th November 2017
- Rodrigo Mundaca, Leader MODATIMA: 6th December, 2017
- SISS Audit Manager, Santiago: 15th December, 2017
- APR Programme Director, Santiago: 27th December 2017

- DOH Director, Santiago: 27th December 2017
- Gloria Alvarado, president FENAPRU: 19th; 20th December, 2017
- APR Director from APR in Rancagua: 19th December, 2017
- Fernando Peralta, President CONCA: 10th January, 2018
- UDI Councillor, GORE in Santiago: 12th January, 2018
- APR President in Santiago and ex President FENAPRU: 7th December 2017
- FENAPRU Vice-President: 7th February, 2018; 22nd December, 2017
- Water Lawyer, Pontifical Catholic University: 22nd December, 2017
- Water Lawyer, Universidad de Chile: 28th December, 2017
- ONEMI Department Municipality of La Serena: 23rd October 2017
- Water Subsidies Department, Municipality of La Serena: 23rd October 2017
- Director Chile Sustentable, Santiago: 14th December 2017
- Environmental Health MINSAL, Santiago: 26th December, 2017; 8th January 2018
- Water Economist, Pontifical Catholic University: 8th January, 2018
- DGA Lawyer, Santiago: 8th January 2018
- Investment Department Officer and Informatics Project Manager, MIDESO: 25th January, 2018
- Director of Federation of FESAN¹⁶⁴: 15th January, 2018
- MOP, Economist: 17th January, 2018
- DGA Lawyer: 17th January, 2018
- APR President: 18th October 2017; 16th March, 2018
- MIDESO Director of Social Investment and Assessment: 15th March 2018

Participant Observation:

- “PAC Event for Improvement and Extension Project”, APR: 19th October 2017

¹⁶⁴ Acronym in Spanish for *Federación Nacional de Cooperativas de Servicios Sanitarios*, “National Federation of Cooperatives for Sanitary Services”

- Neighbour Organisation Meeting: 24th October 2017
- Presentation on “Indigenous waters and Water Code Modifications”, organised by NGO FIMA, Santiago: 5th December 2017
- “AGRESAP¹⁶⁵ Meeting”, Rancagua, organised by AGRESAP: 19th December, 2017
- “Informative Workshop Law on RSS”, organised by FENAPRU, Pichidegua: 4th January, 2018
- CORE Commission: 12th January, 2018
- Informative Talk on Participation in Law on RSS, organised by AVINA: 25th January, 2018

¹⁶⁵ Acronym in Spanish for *Asociación Gremial de Agua Potable Rural de la VI región*, “Union Association of Rural Drinking Water, VI Region”.